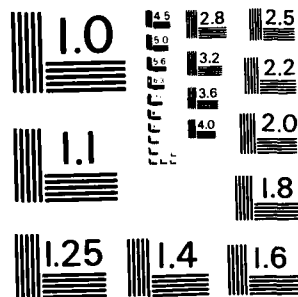


LAKE ERIE NUTRIENT LOADS 1970-1980(U) CORPS OF
ENGINEERS BUFFALO NY BUFFALO DISTRICT
S M YAKSICH ET AL. SEP 82

113

F/G 13/2

NE



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

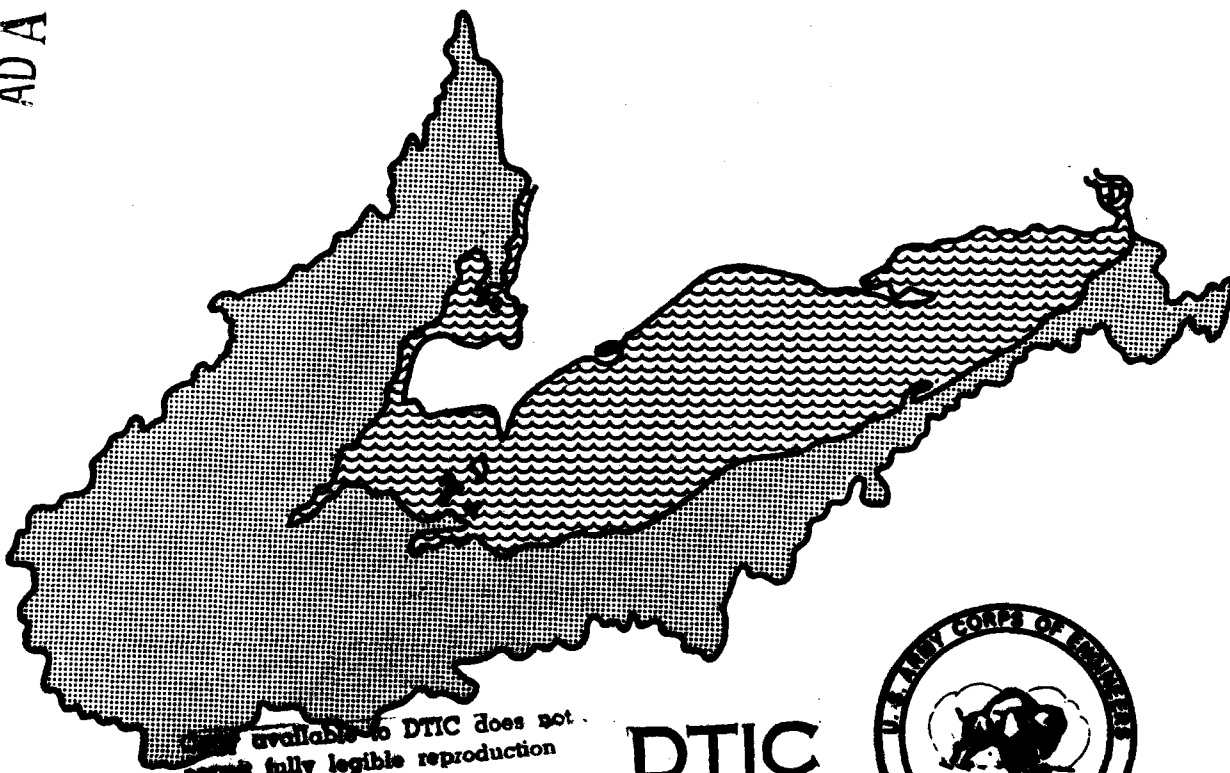
11

TECHNICAL REPORT SERIES

LAKE ERIE NUTRIENT LOADS, 1970-1980

ADA132454

DTIC FILE COPY



Not available to DTIC does not
permit fully legible reproduction

DTIC
ELECTE
SEP 13 1983
S E D



PREPARED FOR THE
LAKE ERIE WASTEWATER
MANAGEMENT STUDY

U.S. ARMY ENGINEER DISTRICT, BUFFALO

This document has been approved
for public release and sale; its
distribution is unlimited.

83 09 07 007

DISCLAIMER NOTICE

**THIS DOCUMENT IS BEST QUALITY
PRACTICABLE. THE COPY FURNISHED
TO DTIC CONTAINED A SIGNIFICANT
NUMBER OF PAGES WHICH DO NOT
REPRODUCE LEGIBLY.**

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Lake Erie Nutrient Loads, 1970-1980		5. TYPE OF REPORT & PERIOD COVERED Final
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Steven Yaksich, David Melphi, David Baker Jack Kramer		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Army Engineer District, Buffalo 1776 Niagara Street Buffalo, N.Y. 14207		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE September 1982
		13. NUMBER OF PAGES 201
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report)
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Distribution Unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Nutrient Loadings Outflow Data Lake Erie Water Quality Phosphorus		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This program was designed to monitor concentration changes occurring in association with increased streamflow with primary emphasis placed on sampling during high flow conditions (when the bulk of mass transport occurs). This report presents the authors' best estimate of the loadings for several nutrients to Lake Erie using collected data. A Calculational procedure employing stepwise concentration functions for fixed flow intervals was developed. Intervals which best represented the full range of streamflows were selected and used in		

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

conjunction with the daily flow records and the concentration functions to calculate monthly loadings. Loadings for unmeasured areas were extrapolated from the loadings for adjacent areas. The loadings were then combined with municipal and industrial point source loading information and Lake Huron outflow data to produce a point, nonpoint, and total nutrient load summary for the Detroit-St. Clair Basin and the three basins of Lake Erie on a monthly and yearly basis for the period 1970-1980. The nutrient loadings presented include total phosphorus, orthophosphate, nitrite-nitrate, ammonia, organic nitrogen, chloride, and silica. A three-basin, in-lake, total phosphorus model is presented, and inlake concentrations are modeled using the calculated 1970-1980 loadings. The results are compared with measured in-lake values.

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

Lake Erie Nutrient Loads, 1970-1980

by

Stephen M. Yaksich
and
David A. Melfi

Lake Erie Wastewater Management Study
U. S. Army Corps of Engineers
Buffalo, NY 14207

and

David B. Baker
and
Jack W. Kramer

Water Quality Laboratory
Heidelberg College
Tiffin, OH 44156

Accession for	
MR	X
ED	
Uncl	
Just	
By	
Distribution	
Availability Codes	
Dist	Avail and/or Special
A	23



Lake Erie Wastewater Management Study
U. S. Army Corps of Engineers District, Buffalo
1776 Niagara Street
Buffalo, NY 14207

September 1982

TABLE OF CONTENTS

List of Figures	iii
List of Tables	iv
Acknowledgement	v
Abstract	vi
Introduction	1
Sampling Strategies and Associated Errors for Loading Estimates	3
Fixed Interval Sampling	3
Event Sampling	5
Lake Erie Wastewater Management Study Sampling Program	6
Loading Calculations	10
Tributary Loads	10
Point Source Loading Calculations	14
Lake Huron Outflow Loadings	15
Point/Nonpoint Nutrient Load Summary	16
Results and Discussion	21
Three-Basin Lake Erie Total Phosphorus Model	26
Conclusions	32
References	33
Appendix 1 (Yearly Loading Summary)	37
Appendix 2 (Monthly Loading Summary)	61

FIGURES

Figure 1 - Daily Total Phosphorus Loads in the Maumee River at Waterville, 1975.	4
Figure 2 - Lake Erie Drainage Basin Areas Used in the Nutrient Calculations.	9
Figure 3 - Example of the Flow Interval Method for the Huron River for 1977.	11
Figure 4 - Nonpoint Load Extrapolation to Unmeasured Basins.	17
Figure 5 - Monthly Total Phosphorus Loads to Lake Erie, 1970-1980.	20
Figure 6 - Lake Erie Monthly Loads, 1977 and 1978: (a) Total phosphorus (b) Soluble orthophosphate (c) Nitrite-nitrate nitrogen (d) Ammonia nitrogen (e) Organic nitrogen (f) Chloride (g) Silica	22
Figure 7 - Lake Erie Nutrient Loads, 1970-1980: (a) Total phosphorus (b) Soluble orthophosphate (c) Nitrite-nitrate nitrogen (d) Ammonia, nitrogen (e) Organic nitrogen (f) Chloride (g) Silica. (Does not include atmospheric input or shoreline erosion.)	23
Figure 8 - Total Phosphorus Loads to Lake Erie, 1970-1980; Point and Non-Point (Does not include shoreline erosion or atmospheric input.)	25
Figure 9 - Three-Basin Total Phosphorus Budget Model for Lake Erie	27
Figure 10 - Lake Erie Total Phosphorus Concentrations A - Model Prediction for 1970 Loadings and Concentrations B - Model Predictions for Average 1970-1975 Loadings, and Concentrations Data Points and Error Bars Showing ± 1 Standard Deviation from Actual Mean Concentrations Are Presented.	30

TABLES

1	Water Quality Stations in the Lake Erie Drainage Basin Used for Loading Calculations	7
2	Default Concentration Values for Effluent Concentrations from Wastewater Treatment Plants	15
3	Yearly Summary for 1970 - Basin Loading in Metric Tons per Year	19

ACKNOWLEDGEMENT

The U. S. Army Corps of Engineers, Buffalo District, and the U. S. Environmental Protection Agency, through both the Environmental Research Laboratory at Athens, Georgia, and the Great Lakes National Program Office, provided joint financial support for the water quality sampling program. The authors would like to express their appreciation to the staff of the agencies who collected and analyzed the water quality samples. These agencies include: the Water Quality Laboratory, Heidelberg College; the Michigan Department of Natural Resources; the Toledo Metropolitan Council of Governments; the city of Cleveland; and the Geology Department, State University College of New York at Fredonia. The Ontario Ministry of the Environment graciously supplied water quality and flow information for the Canadian streams while the U. S. Geological Survey provided discharge information and some water quality data for the major Lake Erie streams. Bruce Wallace was instrumental in the original compilation of the point source file from EPA and State agency records along with the International Joint Commission reports on the Great Lakes water quality. Davis Kraus and Darlene Rowen provided valuable assistance in updating the point source file for recent years.

ABSTRACT

The Buffalo District, Corps of Engineers' Lake Erie Wastewater Management Study and Heidelberg College's Water Quality Laboratory supported a tributary water quality monitoring program from 1974 to 1980 of the major United States tributaries to Lake Erie. For selected streams, sampling stations were established at the furthest downstream U. S. Geological Survey flow gaging station. This program was designed to monitor concentration changes occurring in association with increased streamflow with primary emphasis placed on sampling during high flow conditions (when the bulk of mass transport occurs). This report presents the authors' best estimate of the loadings for several nutrients to Lake Erie using collected data. A calculational procedure employing stepwise concentration functions for fixed flow intervals was developed. Intervals which best represented the full range of streamflows were selected and used in conjunction with the daily flow records and the concentration functions to calculate monthly loadings. Loadings for unmeasured areas were extrapolated from the loadings for adjacent areas. The loadings were then combined with municipal and industrial point source loading information and Lake Huron outflow data to produce a point, nonpoint, and total nutrient load summary for the Detroit-St. Clair Basin and the three basins of Lake Erie on a monthly and yearly basis for the period 1970-1980. The nutrient loadings presented include total phosphorus, orthophosphate, nitrite-nitrate, ammonia, organic nitrogen, chloride, and silica. A three-basin, in-lake, total phosphorus model is presented and in-lake concentrations are modeled using the calculated 1970-1980 loadings. The results are compared with measured in-lake values.

[illegible]

INTRODUCTION

Public Law 92-500 authorized the U. S. Army Corps of Engineers to develop a wastewater management program for Lake Erie. The study identified the development of reliable nutrient loads to the lake as a major task. During the initial stage, a close examination of existing water quality records for the major Lake Erie tributaries was made. A program of bimonthly sampling had been carried out on the south shore tributaries from 1967 to 1969 by the Federal Water Pollution Control Agency (FWPCA 1969). State and provincial agencies carried out monthly sampling programs on some tributaries and the U. S. Geological Survey (USGS) also sampled some tributaries monthly. These programs with the exception of FWPCA's, were designed to monitor ambient water quality and not the mass transport of nutrients to the lake. The FWPCA report concluded, "Widely variable flow conditions were encountered at the time of sampling. Generally, concentrations did not show consistent changes with changes in flow; however, major loadings did occur during high discharges. The limited frequency of sample collection, particularly during periods of high flow, could bias the data."

Many agencies report total phosphorus loads to Lake Erie based upon the monthly sampling. Rarely are the loadings for other parameters reported. Total phosphorus loads to Lake Erie are reported annually by the Water Quality Board of the International Joint Commission. Each political jurisdiction reports tributary, municipal, and industrial loads. However, the sampling programs for the tributary loading estimates are often inadequate. Usually 12 samples per year are collected, sometimes more, but usually less. Sampling programs at these frequencies are likely to underestimate the annual loads because most of the phosphorus transport

occurs within a few days of high flow and these events are not usually sampled (Yaksich and Verhoff 1983). Since 1980, the Great Lakes National Program Office has supported event sampling programs which supplement the local jurisdictional data. Sampling frequencies have recently increased for some Canadian tributaries.

An event sampling program was established by the Lake Erie Wastewater Management Study in the fall of 1974. This sampling program documented established tributary loading to the lake and the data were used to define nutrient loads to Lake Erie as presented within this report. These loadings are the authors' best estimate for several nutrient parameters. These parameters were chosen primarily because they are important to the lake's welfare and also because they were needed to interface with lake modeling efforts carried out at Manhattan College under the sponsorship of the USEPA's Large Lakes Laboratory at Grosse Isle, Michigan.

SAMPLING STRATEGIES AND ASSOCIATED ERRORS FOR LOADING ESTIMATES

For event response rivers, such as those draining into Lake Erie, most of the nutrient and material transport occurs during storm events and the spring runoff period. Some materials such as total phosphorus and suspended sediment increase in concentration with increasing flow, while others such as chloride tend to decrease with increasing flow. Other nutrients such as the nitrogen species show no definite relationship to changes in flow, although they may show some increase for increasing flows. Even where nutrient concentrations decrease with increasing flow, the nutrient loading increases since the relative increase in flow is much greater than the relative decrease in concentration. Figure 1 shows the resultant total phosphorus transport for a storm event. It is during the high flow events that the bulk of the material transport to Lake Erie takes place. Hence, it is imperative to have good sampling during this period in order to accurately define the nutrient transport.

Fixed Interval Sampling

The monthly sampling programs carried out by most agencies in the U. S. are examples of fixed interval sampling. In these programs, water quality samples are taken at predetermined times, at intervals such as once or twice a month. Treunert et al. (1974) examined the effect of sampling frequencies on the determination of the annual phosphorus load of small to moderate streams (Wahnbach River in Germany) with low flows and no relationship between total phosphorus concentration and flow (stable response river). They examined sampling frequencies of 1 to 29-day intervals between measurements. They also examined four different averaging methods to determine

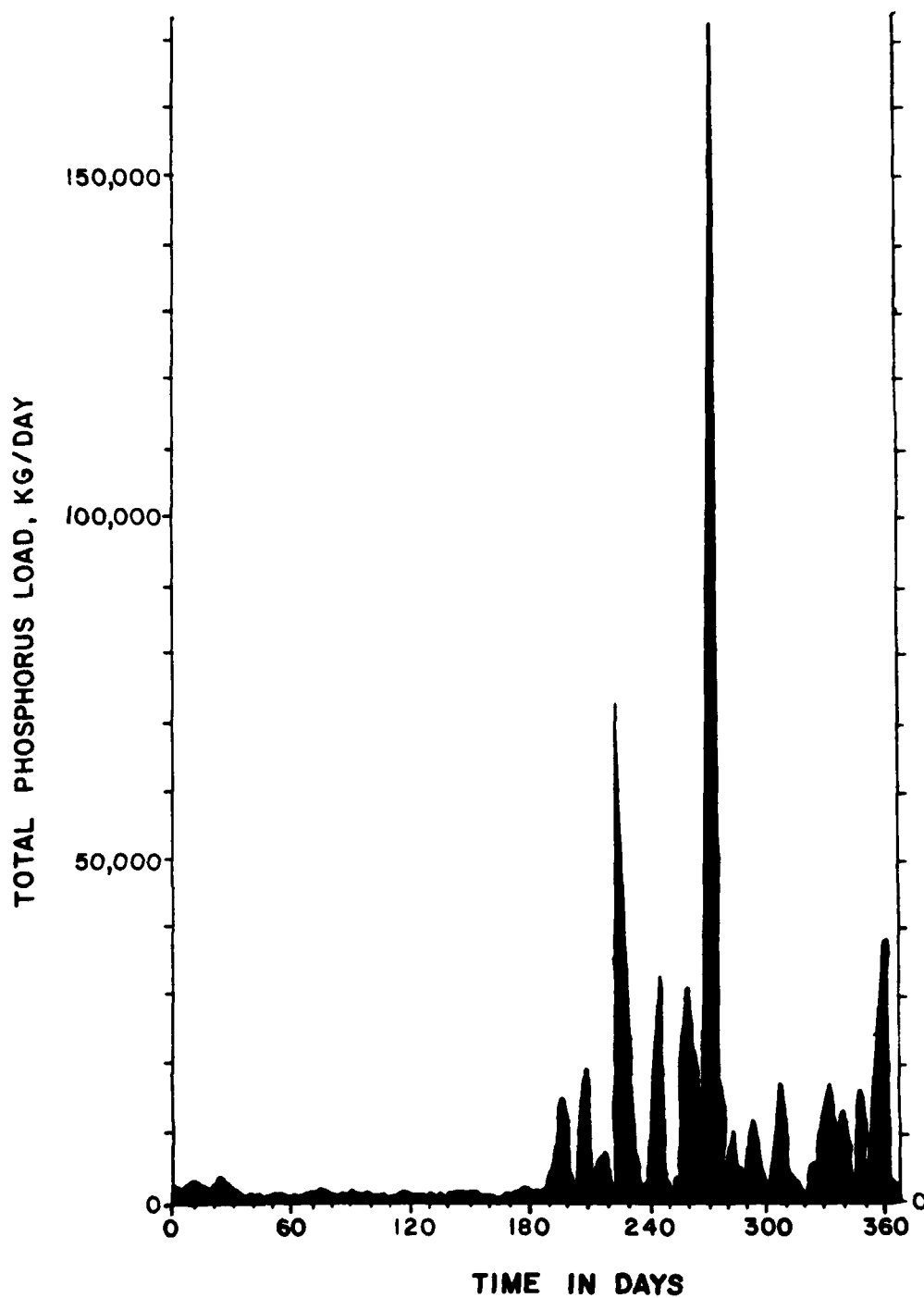


Figure 1 - Daily Total Phosphorus Loads in the Maumee River at Waterville, 1975.

annual loads. They concluded that use of continuous flow measurement by means of a level recorder leads to annual total phosphorus loads two to four times more accurate than discontinuous flow measurements with a simple measuring weir. In addition, they concluded that sample intervals of 14 to 21 days (17 to 26 samples/year) and continuous flow measurements with a level recorder are required to keep deviations within 20 percent of the reference value.

In contrast to the above results, Hetling, et al. (1976) concluded that a fixed interval sampling is of little value to obtain annual loads unless daily or every other day samples are taken. With sample intervals of 14 to 21 days (17 to 26 samples/year) deviations of 700 percent were obtained for particulate phosphorus and 1,700 percent for suspended sediment for an event response river. They further concluded that a sampling strategy based on sampling high flow events was necessary to obtain reliable annual loads for an event response river.

Event Sampling

Yaksich and Verhoff (1983) examined high flow sampling strategies for event response rivers in the Lake Erie Basin (Maumee, Portage, Sandusky, and Huron Rivers). They examined total phosphorus, soluble reactive phosphorus, and sediment transport. They recommended a sampling program that included two to three of the largest events with 15 to 20 grab samples collected over each hydrograph, and an additional 5 to 10 samples collected during steady flow. They concluded that this program would yield a load estimate with an error of 10 to 20 percent. They also determined that if high flows were not sampled loads would be underestimated by 15 to 30 percent.

LAKE ERIE WASTEWATER MANAGEMENT STUDY WATER QUALITY SAMPLING PROGRAM

A review of current research into river system chemical dynamics indicated that a significant new understanding of mass transport of pollutants had been developed. Two major studies, one in the Sandusky River Basin of Ohio (Baker and Kramer, 1973) and the other in the Brandywine River Basin of Pennsylvania (Cahill, et al. 1974) had utilized a sampling program of synchronized flow and chemical measurement at selected river sampling stations in an effort to develop accurate mass transport over a period of a year. By concentrating on the measurement of chemistry during storm runoff, these studies indicated that a significant portion of the total chemical pollutant transport out of a river system occurred during periods of high flow. More importantly, they showed very distinct increases in concentrations of certain water quality parameters during high flow, contrary to the dilutional effect that had been observed over the years with the standard sampling programs.

Based on this information and because of the inadequacy of the available chemical record for Lake Erie tributaries, a sampling program was designed by the Lake Erie Study staff during the autumn of 1974 to measure flow and chemistry on selected tributaries. The initial stream selection was based primarily on the quality of flow records available, since the availability of a continuous flow recorder station at the sampling site would facilitate the measurement of stream flow changes with corresponding changes in water chemistry. The longer the flow record, the more accurate the flow "rating curve."

It should be noted that this sampling program was designated on the basis of anticipating increased concentrations of certain pollutants, such as total

Table 1 - Water Quality Stations in the Lake Erie Drainage Basin Used for Loading Calculations

Station-Location (USGS Gage No./ Canada Water Survey No.)	Drainage Area (square miles)	Map Code	Sampling Dates (1)	Number of Samples (1)	Total No. of Samples (2)
Michigan					
Black River near Fargo (04159500)	480	1	4 Mar 77	63	63
Belle River at Memphis (04160600)	151	5	4 Mar 77	63	65
Clinton River at Mt. Clemens (04165500)	734	7	4 Mar 77	63	63
River Rouge at W. Jefferson Bridge (04199000)	467	9	3 Mar 77	63	63
Huron River at S. Metropolitan Parkway (04176500)	849	11	3 Mar 77	63	63
River Raisin near Monroe	1,042	13	3 Mar 77	63	82
Ohio					
Maumee River at Waterville (04193500)	6,330	15	10 Jan 75	2,181	2,261
Portage River at Woodville (04195500)	428	19	19 Dec 74	1,976	2,045
Sandusky River near Fremont (04198000)	1,251	23	7 Dec 74	3,472	3,504
Huron River at Milan (04199000)	371	25	15 Dec 74	2,318	2,416
Vermillion River near Vermilion (04199500)	262	27	23 Feb 75	113	276
Black River at Elyria (04200500)	396	29	22 Feb 75	63	338
Rocky River near Berea (04201500)	267	31	6 Jan 77	63	169
Cuyahoga River at Independence (04208000)	707	33	22 Feb 75	114	671
Chagrin River at Willoughby (04209000)	246	35	22 Feb 75	408	298
Grand River at Painesville (04212200)	701	37	20 Nov 76	173	180
Ashtabula River near Ashtabula (04212500)	121	39	12 Mar 77	23	132
Conneaut Creek at Conneaut (04213000)	175	41	12 Mar 77	23	65
New York					
Cattaraugus Creek at Gowanda (04213500)	432	49	11 Jan 75	188	268
Ontario					
Grand River at Brantford (02GB001)	2,010	53	-	-	72
Nanticoke River at Nanticoke (02GC022)	71	55	-	-	99
Lynn River at Simcoe (02GC008)	55	57	-	-	105
Dedrich Creek near Port Rowan (02GC013)	28	59	-	-	71
Big Creek near Waslingham (02GC007)	228	61	-	-	106
Big Otter Creek near Vienna (02GC004)	269	65	-	-	81
Catfish Creek near Sparta (02GC018)	111	67	-	-	132
Kettle Creek at St. Thomas (02GC002)	127	69	-	-	98
Sturgeon Creek near Leamington (02GH001)	5	72	-	-	78
Thames River at Thamesville (02GE003)	1,660	75	-	-	89
Snydenas River near Dresden (02GC007)	478	77	-	-	98
Ruscom River near Ruscom Station (02GH002)	48	79	-	-	55

(1) Analyzed through the Lake Erie Wastewater Management Study.

(2) Includes additional samples from other agencies which were used in the loading calculations.

phosphorus, occurring in association with increased stream flows. For this reason, primary emphasis was placed on sampling high flow conditions, since the occurrence of increased concentrations during high flows would substantially increase mass transport. Historical chemical records, when available, were confined almost entirely to middle and lower flow regimes with virtually no data for the high flow range.

Ten sampling stations were selected for monitoring during 1975. They measure runoff from 10,423 square miles or 51 percent of the total Lake Erie drainage area in the United States. Heidelberg College's Water Quality Laboratory, the city of Cleveland's Water Quality Program, and the State University College of New York at Fredonia were contracted for sample collection and analysis during 1975. The Toledo Metropolitan Area Council of Governments contracted with Heidelberg College to continue stations on the Maumee, Portage, Sandusky, and Huron Rivers from June 1975 to June 1976.

The Michigan Department of Natural Resources, Heidelberg College, and the Great Lakes Laboratory were contracted by the Corps of Engineers for 1977. The U. S. Geological Survey (USGS) also collected some samples for analysis by Heidelberg College. EPA's Athens Laboratory and the Rockefeller Foundation provided support on the Maumee, Portage, Sandusky, and Huron Rivers for the second half of 1977 and 1978. The Great Lakes National Program Office contracted Heidelberg College and the USGS for sample analysis and collection in 1978 and 1979. Table 1 shows the tributaries that were sampled and used for the loading calculations. Many more sampling stations were established than those used here, mostly upstream of these stations (Corps of Engineers, 1982). For the Canadian side, water quality data were

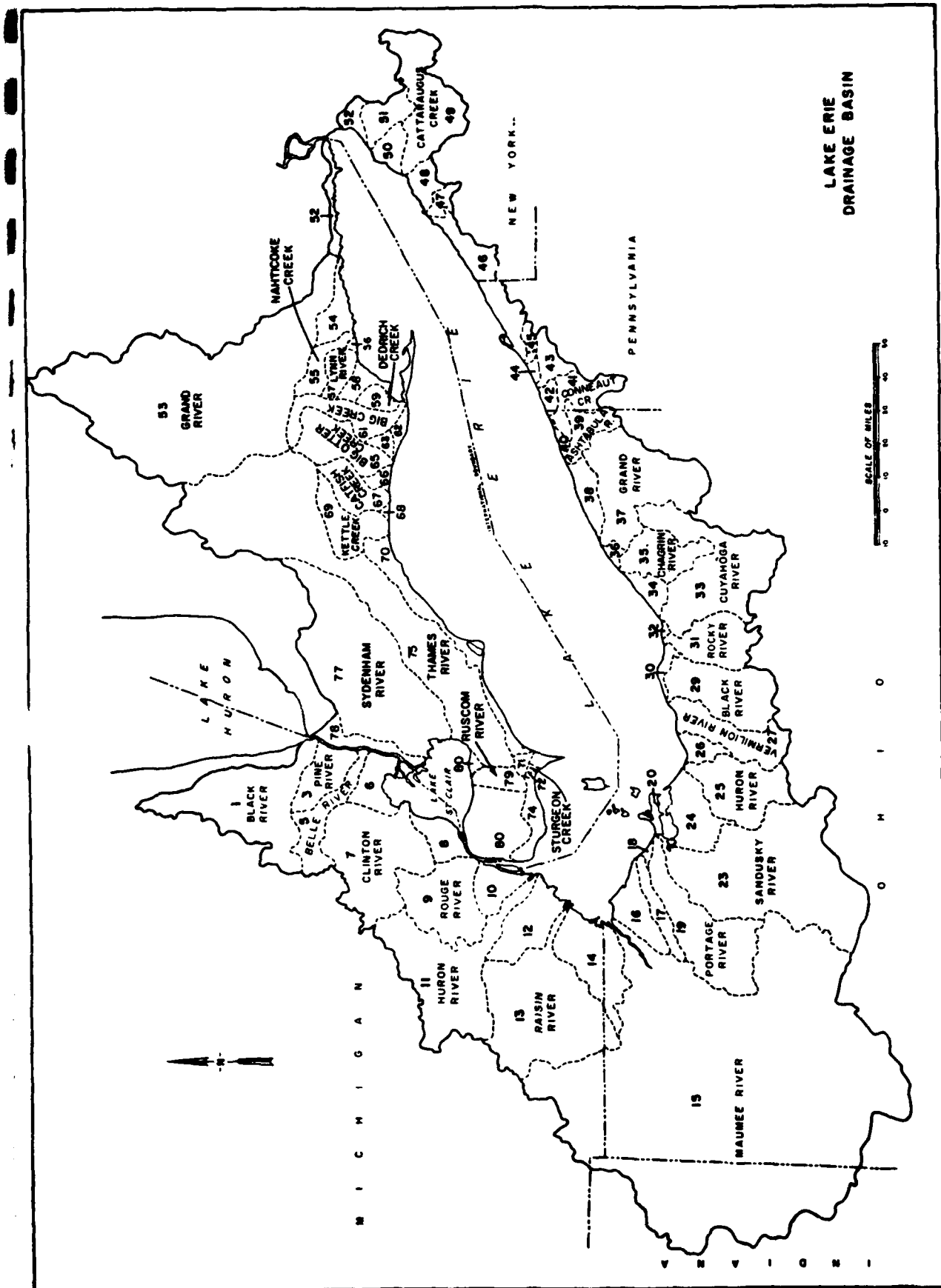


Figure 2 Lake Erie Drainage Basin Areas Used in the Nutrient Calculations.

obtained through the Ontario Ministry of the Environment and flow data through Canada Water Survey.

Samples collected were analyzed for the following parameters: total and orthophosphorus, nitrite-nitrate nitrogen, ammonia nitrogen, chlorides, dissolved silica, suspended solids, and conductivity. Twenty percent of the samples were analyzed for total kjeldahl nitrogen, inorganic nitrogen, and iron. Analytical methods are summarized in "Lake Erie Basin Tributary Mouth, Water Quality Data" (Corps of Engineers, 1977). The sampling procedures and results for the northwestern Ohio River have been described in detail by Baker (1982). Table 1 shows the sampling dates and number of samples taken on the U.S. streams under direct support from the Corps of Engineers. The map codes correspond to locations in Figure 2. Data for these stations were augmented by data collected and analyzed through USEPA support and data from the USGS. The total number of samples used in the loading calculations is also shown in Table 1. Stream flow data were provided by the Michigan, Ohio, and New York Divisions of the U. S. Geological Survey.

LOADING CALCULATIONS

Tributary Loads

For nutrient loading calculation purposes, the Lake Erie drainage basin was broken into 80 subbasins. These subbasins correspond to the major tributaries flowing into Lake Erie, the Detroit River, Lake St. Clair and the St. Clair River, and the adjacent areas between these tributaries with direct drainage to the lake. These 80 subbasins are shown in Figure 2.

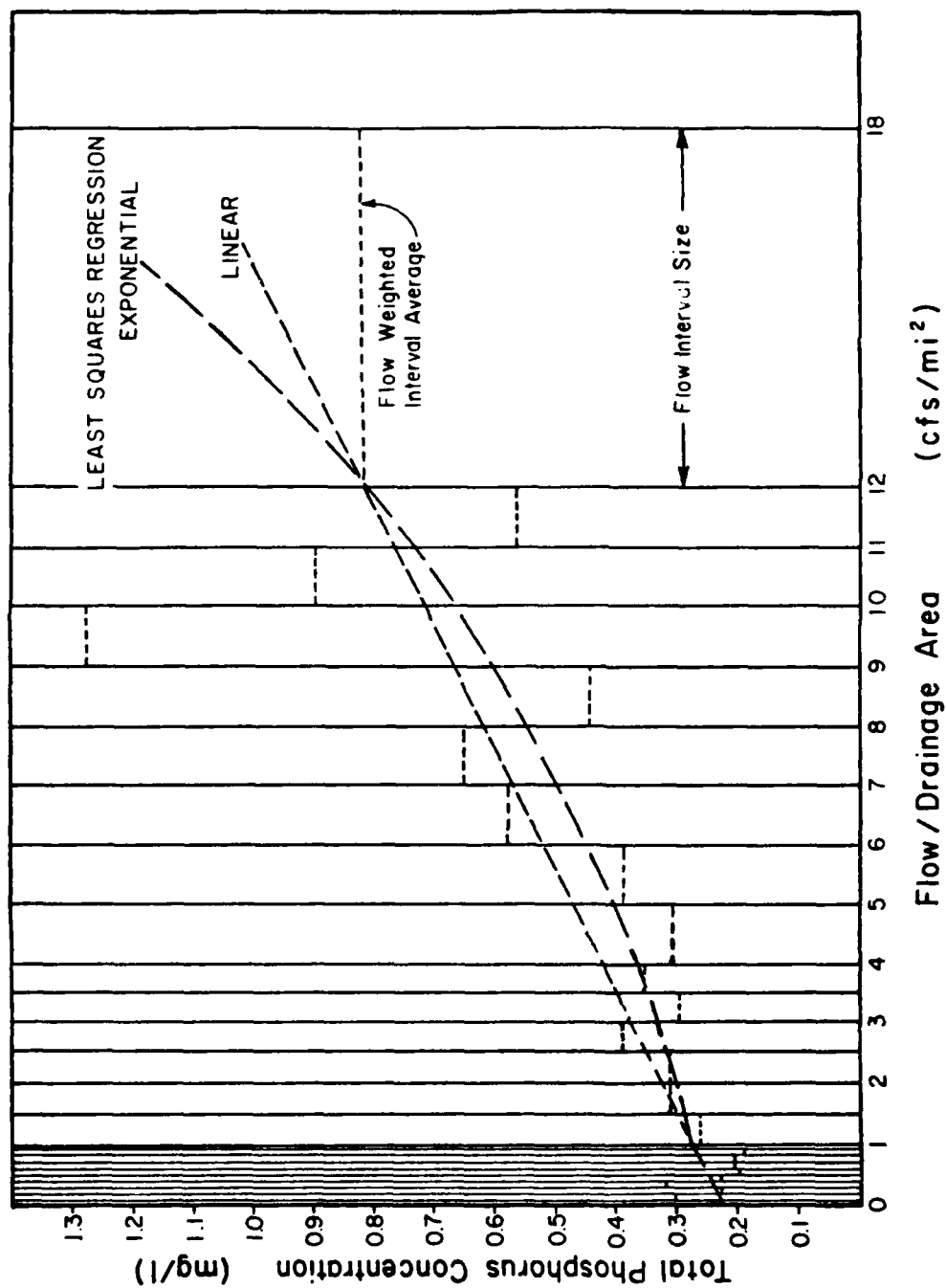


Figure 3 Example of the Flow Interval Method for the Huron River for 1977.

For the 19 sampled main stem streams on the U. S. side of Lake Erie and the 12 Canadian streams, nutrient transport loadings were calculated on a monthly basis for the period 1970-1980. The method used is called the flow interval method and has been described by Verhoff, et al. (1980). The flow interval method divides the expected discharge range into groups. Within each group, a flow weighted mean concentration is calculated. Daily flows are used with the concentration which was calculated for the interval in which the flow belongs to calculate the load for the day. Daily loadings were then summarized for monthly loads.

Figure 3 shows a plot of concentration versus flow. The concentration may increase, decrease, or not be affected by increasing flow. One method of deriving a concentration-flow relationship is to approximate this relation by a least squares curve as shown in Figure 3. As can be seen, this does not necessarily define the relationship very well, in some cases. However, a much better approximation can be achieved when the flow is broken up into convenient groups and flow weighted mean concentrations are calculated. The flow groups may be picked by any convenient method such as taking the maximum flow and dividing it into a certain number of intervals. For the calculations and results presented in this paper, a unit area flow was chosen. This was done for two reasons. First of all, the intervals would be uniform for all years and would not be related to any one year's high flow, and therefore, results for different years could be compared. This comparison allows known data to be substituted in years which had missing data. Secondly, the flow weighted mean concentrations can be compared for different streams. The unit area flow intervals chosen were not uniform in size. They were small on

the low end and large on the high side, and as many as 30 intervals were used.

If enough data points existed for a year and they were high flow oriented, the flow weighted mean concentrations were calculated for each flow interval. If a given year lacked enough data to be used in the calculation, these data were combined with data from an adjacent year and used in the calculation. In the case in which data were totally lacking for a year, flow weighted mean concentrations averaged over the years for which there were data were used. This was possible because the unit area flow groups were the same size for every year. If only one or no points existed for a given interval, the flow weighted mean concentration for that interval was approximated from two adjacent intervals in that year. At least two data points per interval were required. In the situations where high flow data were missing the concentration from an adjacent year for the appropriate unit area flow interval were used. In some cases, not enough samples were taken or no samples were taken during high flow for the entire period of record. In these cases a least squares regression of total phosphorus with discharge that was generalized for the Lake Erie watershed was used to define the daily phosphorus loadings (Verhoff, et al., 1980)

It should be noted that large seasonal differences in concentration versus flow relationships are present and well documented for the intensively studied basins. Since correspondingly detailed data were not available for most monitored streams, annual rather than seasonal concentrations versus flow relationships were used. This would tend to overestimate winter and early spring loading and underestimate late spring and summer loading, but

these should average out for the year. Using this method monthly loads were calculated for total phosphorus, soluble reactive phosphorus, nitrate-nitrate nitrogen, ammonia nitrogen, organic nitrogen, suspended solids, chlorides, and soluble silica.

Point Source Loading Calculations

Point source nutrient loadings for the 80 defined basins were calculated from the computer summary of Volume II, Appendix A of the Lake Erie Wastewater Management Study Preliminary Feasibility Report (1975) updated thru 1980. These data were originally compiled from local, regional, and Federal data bases for both the U. S. and Canadian sides of the lake. Most of the information was obtained from EPA, State, and local permit records. It was continuously updated through yearly reports, especially those from the Water Quality Board of IJC, when these became available. The information from each facility in the 80 identified watersheds was compiled with average yearly flows and accompanying concentration data.

Where past data were not known or unavailable, the most recent data were assumed to have remained constant over the preceeding years. An exception to this assumption is treatment plants known to have implemented phosphorus removal. Total phosphorus concentrations were assumed to be 6mg/l before phosphorus removal. When no chemistry data were available, as in the case of small package plants, a concentration was assumed for that plant over all years. Table 2 lists the seven parameters of interest with default concentrations which were assumed when no data were available. In most cases, wastewater treatment plants with flows greater than one million gallons per

day reported values for at least total phosphorus. The default concentrations were based on the discharge from other municipal plants in the Lake Erie Basin. For many of the very small facilities, there was a lack of both flow and chemistry data. Because of the insignificant contributions these small facilities had on Lake Erie as a whole, they were eliminated from the point source file. Nutrient loadings for the seven parameters are calculated for each facility and summed for each basin above and below the flow gaging station. Calculations for the point source loads were made using the average concentration for a year times the average flow for that year. The monthly point source loadings were obtained by proportioning the yearly loads by the number of days in the month.

Table 2 - Default Concentration Values for Effluent Concentrations from Wastewater Treatment Plants

Total Phosphorus	:	6.0 mg/l as P
Orthophosphate	:	3.0 mg/l as P
Nitrate-Nitrite Nitrogen	:	6.6 mg/l as N
Ammonia Nitrogen	:	7.9 mg/l as N
Organic Nitrogen	:	2.33 mg/l as N
Chloride	:	160 mg/l as Cl
Silica	:	5 mg/l as SiO ₂

Lake Huron Outflow Loadings

Lake Huron input to the St. Clair River was handled as a separate entity because of the nature of the water quality data that were available. Data were obtained from the Ontario Ministry of the Environment in the form of

panel measurements across the river. For each panel, flow and concentrations were reported which represented average values for the given panel. From these, a total flow and a panel flow weighted mean for the parameters of interest were calculated for each date information existed. From the yearly records, flow weighted mean concentrations for the year were calculated. In some cases, the yearly record for certain parameters was spotty. If it was judged there were not enough values to have a meaningful flow weighted mean concentration, then data for that parameter were combined with all other year's data for that parameter and these were used for the calculations.

The average daily loading for the head of the St. Clair River was obtained by multiplying the flow weighted mean yearly concentration by the reported average daily flow per month. This daily loading was prorated by the number of days in the month to yield a monthly loading.

Point/Nonpoint Nutrient Load Summary

At this point, the St. Clair River loadings, the tributary loading calculations, and the point source calculations must be brought together to produce a point/nonpoint load summary for each of the 80 designated basins on a monthly basis. Nonpoint or diffuse loadings must be determined for the 80 regions both above and below the gage where they exist.

For the 31 tributary streams, the monthly upstream point sources above the gage are subtracted from the tributary loads. This defines the above gage nonpoint loading. It should be noted, in the case of indirect point sources, during low flow months much of the phosphorus input would be tied up in the stream sediment during these months. In some cases the tributary flow is so

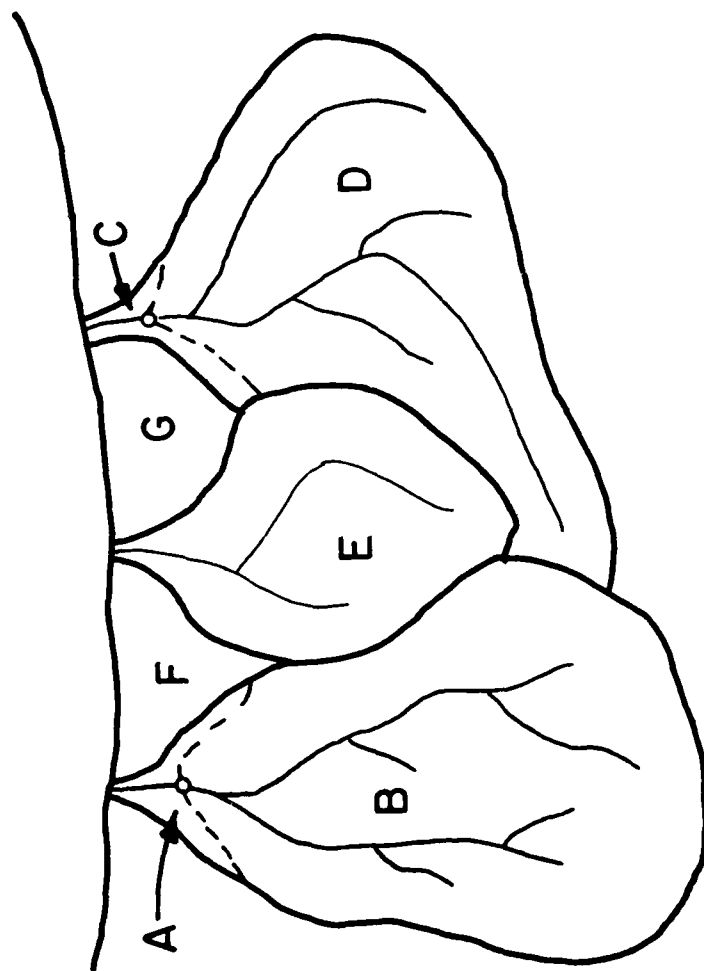


Figure 4 Nonpoint Load Extrapolation to Unmeasured Basins.

low that a negative nonpoint source yield is calculated. In this case the nonpoint yield is taken as zero and point source load is set equal to the tributary load. Dividing the nonpoint source load by the drainage area above the gage defines the above gage unit area nonpoint loading. The downstream nonpoint load below the gage is calculated by multiplying the unit area load by the area below the gage. Loadings for the ungaged areas between the gaged streams were calculated by taking the average unit nonpoint area loads from the two adjoining gaged streams, and multiplying that average by the ungaged area. This same extrapolation procedure was used for streams that did not have a water quality sampling program. The total loading for each of the 80 basins is obtained by summing point and nonpoint loadings above and below the gages.

Figure 4 is used to illustrate the extrapolation of nonpoint loads for measured basins to those basins not measured. Through the water quality sampling program, the tributary loads for areas B and D are defined. Nonpoint loads for these areas can be calculated by subtracting off the point source loads. Nonpoint loads for the area below the sampling points, A and C, can be defined in terms of the unit area loads for areas B and D, respectively. For example, the nonpoint loads for A equals the unit area load for B multiplied by the area of A. The nonpoint load for E can be defined as the area of E multiplied by the average of the unit area loads for B and D. Similarly, loads for F and G can be defined.

To produce monthly and yearly loading for the three basins of Lake Erie and the Detroit/St. Clair River system each of the 80 basin values are added together for the appropriate class. Basins 1-10 and 75-80 are in the

Table 3 - Yearly Summary for 1970 - Basin Loading in Metric Tons per Year

	: Detroit/ : St. Clair : Basin	: Western : Basin	: Central : Basin	: Eastern : Basin	: Total
Total Phosphorus	:	:	:	:	:
Lake Huron	: 2,502	:	:	:	: 2,502
U.S. Nonpoint	: 307	: 2,389	: 1,244	: 296	: 4,236
Canadian Nonpoint	: 966	: 27	: 210	: 608	: 1,811
Total Nonpoint	: 1,273	: 2,416	: 1,454	: 904	: 6,047
U.S. Point	: 6,622	: 1,511	: 3,035	: 538	: 11,706
Canadian Point	: 91	: 0	: 12	: 90	: 193
Total Point	: 6,713	: 1,511	: 3,047	: 628	: 11,899
U.S. Total	: 6,929	: 3,900	: 4,279	: 834	: 15,942
Canadian Total	: 1,057	: 27	: 222	: 698	: 2,004
Basin Total	: 10,488	: 3,927	: 4,501	: 1,532	: 20,448
Ortho Phosphorus	:	:	:	:	:
Lake Huron	: 1,129	:	:	:	: 1,129
U.S. Nonpoint	: 86	: 309	: 123	: 1	: 519
Canadian Nonpoint	: 244	: 38	: 108	: 116	: 506
Total Nonpoint	: 330	: 347	: 231	: 117	: 1,025
U.S. Point	: 3,319	: 665	: 1,341	: 261	: 5,586
Canadian Point	: 47	: 0	: 10	: 47	: 104
Total Point	: 3,366	: 665	: 1,351	: 308	: 5,690
U.S. Total	: 3,405	: 974	: 1,464	: 262	: 6,105
Canadian Total	: 291	: 38	: 118	: 163	: 610
Basin Total	: 4,825	: 1,012	: 1,582	: 425	: 7,844

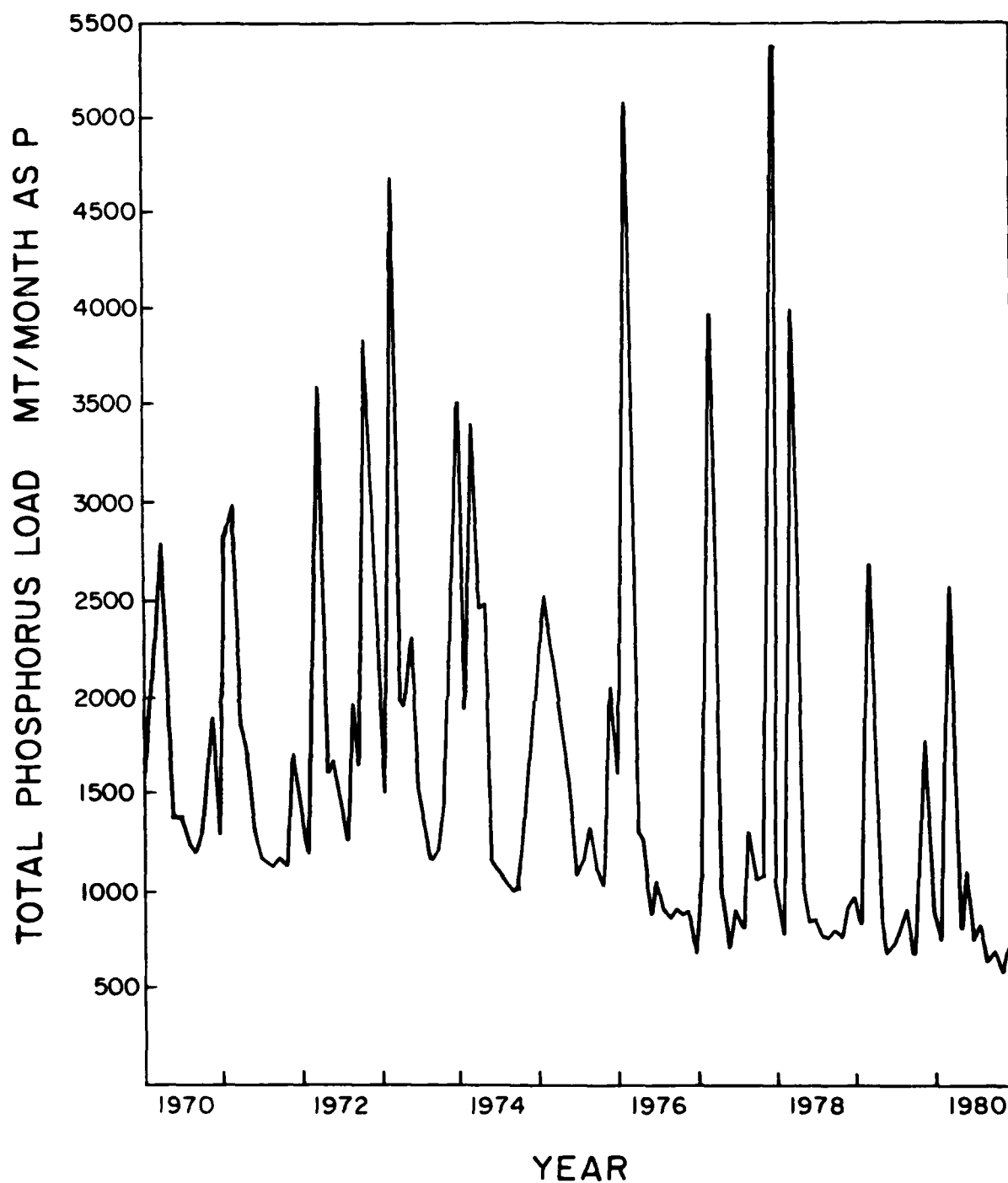


Figure 5 Monthly Total Phosphorus Loads to Lake Erie, 1970-1980.

drainage area for the Detroit/St. Clair Basin. The total input from this basin to the Western Basin of Lake Erie is the sum of these plus the Lake Huron input. The total added tributary loading to the Western Basin, excluding the Detroit River input, is the sum of basins 11-20 and 72-74. The total loading to the Western Basin is the sum of these and the Detroit River input. The tributary loading to the Central Basin is the sum of basins 21-45 and 62-71, while that for the Eastern Basin is the sum of 46-61. For any modeling purposes, it must be remembered that these are the external sources to the lake and the Central and Eastern Basins would also receive inputs from these upstream basins. For these calculations, atmospheric loadings and any phosphorus added due to shore erosion were not added.

Table 3 illustrates part of the yearly summary for 1970. A complete set of the yearly and monthly loading summary can be found in Appendix 1 and 2 of this report.

RESULTS AND DISCUSSION

Monthly loadings to Lake Erie exhibit considerable variation for the 11-year period, 1970 to 1980. An example of this variation is the total phosphorus loads shown in Figure 5. In general, large increases in loading are seen to occur during the spring runoff. Loads decrease during the summer and usually remain low during the fall. Despite the large variation in total phosphorus loads that occurred, a decrease in the total phosphorus for 1970 to 1980 can be seen from Figure 5. The decrease in the minimum monthly loads reflects the reductions in point source loading.

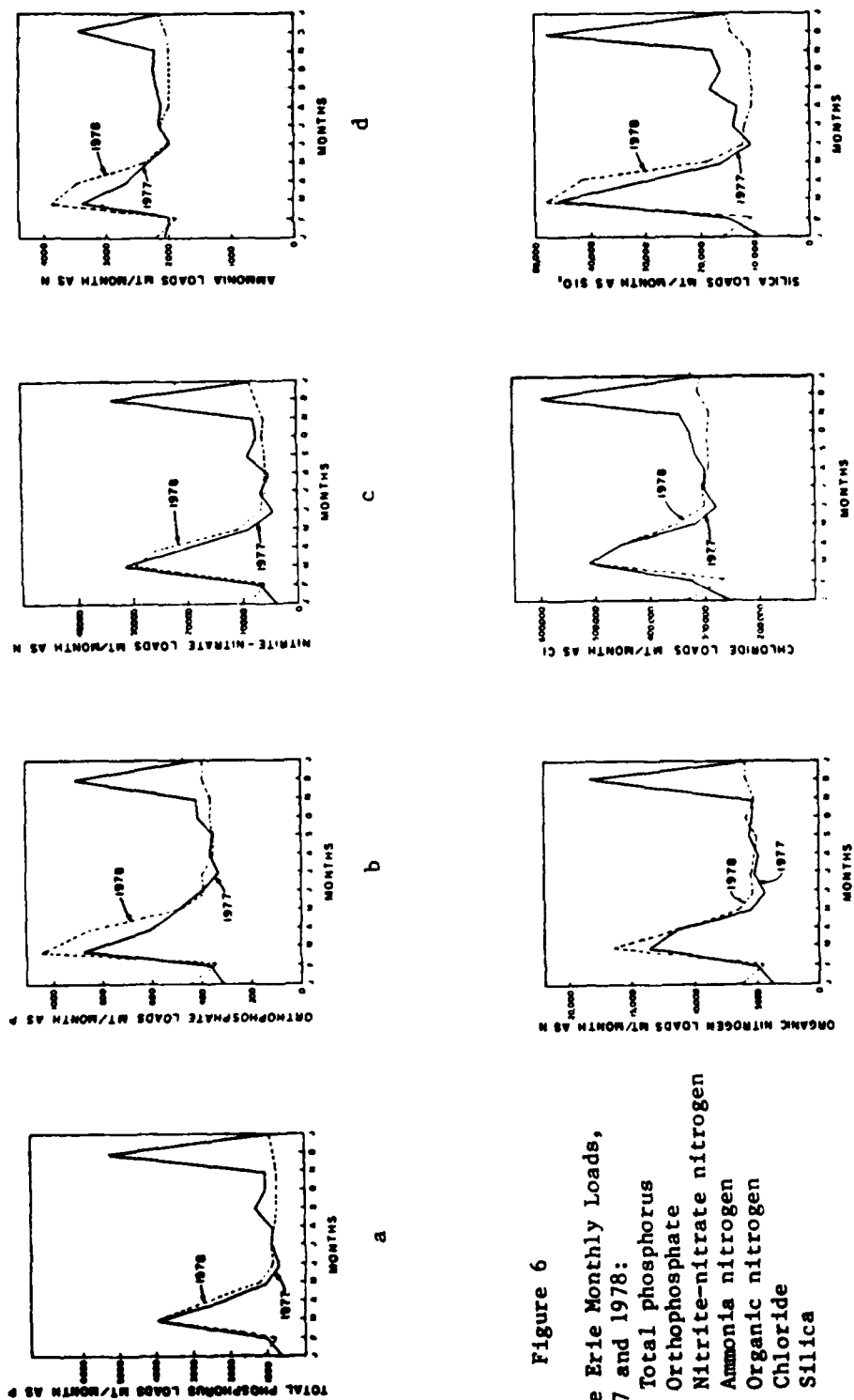


Figure 6
Lake Erie Monthly Loads,
1977 and 1978:
(a) Total phosphorus
(b) Orthophosphate
(c) Nitrite-nitrate nitrogen
(d) Ammonia nitrogen
(e) Organic nitrogen
(f) Chloride
(g) Silica

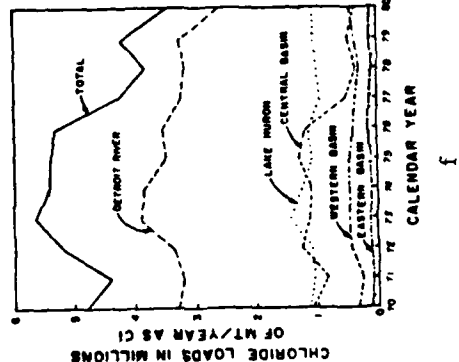
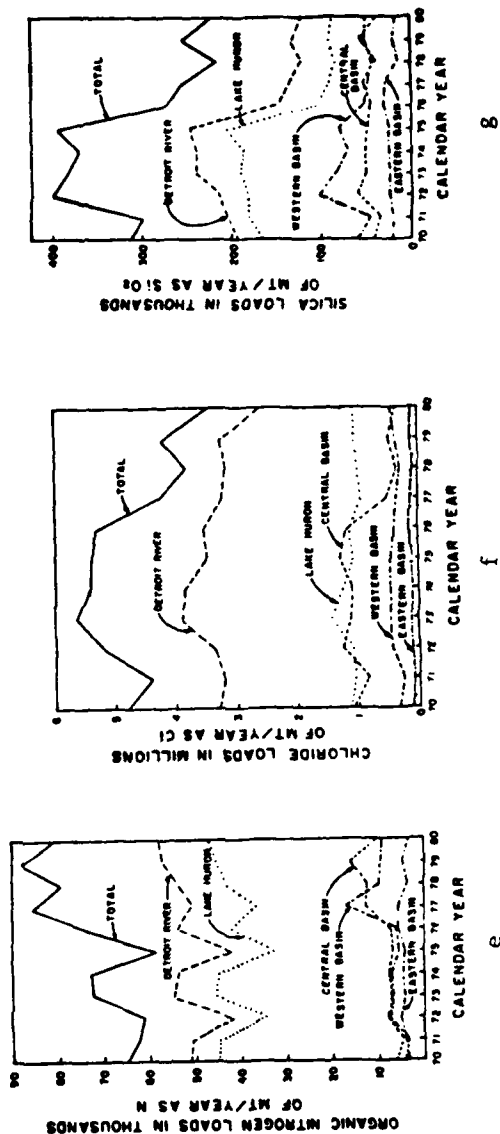
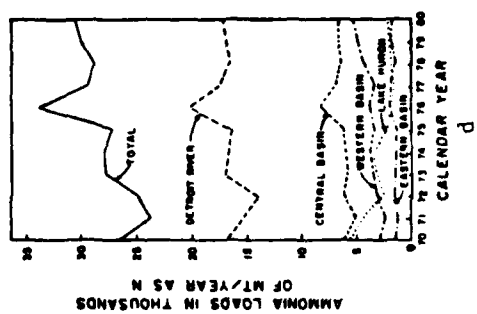
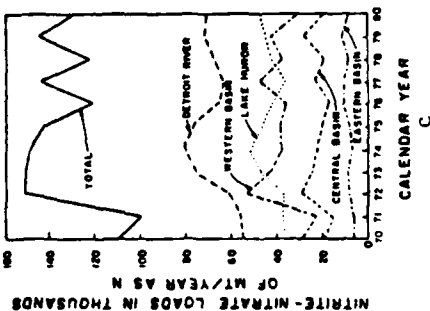
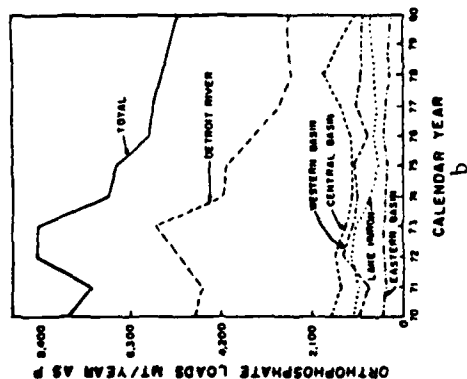
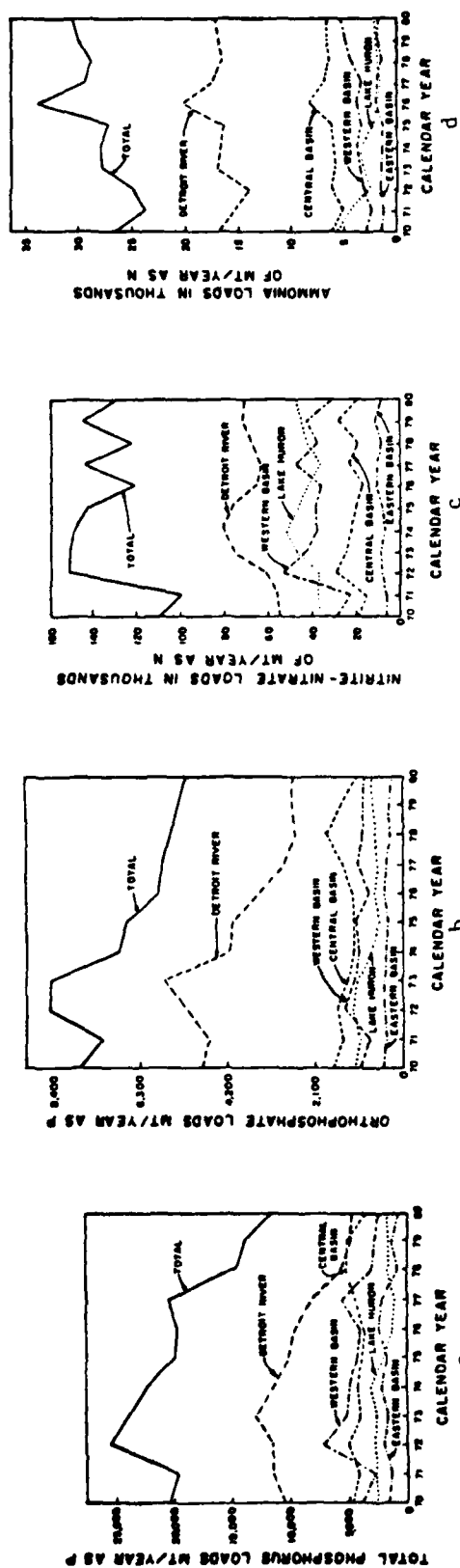


Figure 7

Lake Erie Nutrient Loads,
1970-1980:
(a) Total phosphorus
(b) Soluble orthophosphate
(c) Nitrite-nitrate nitrogen
(d) Ammonia nitrogen
(e) Organic nitrogen
(f) Chloride
(g) Silica
(Does not include atmospheric
input or shoreline erosion)

Figure 6 shows a comparison of the monthly loading between years 1977 and 1978 for the parameters total phosphorus, soluble orthophosphate, nitrite-nitrate nitrogen, ammonia nitrogen, organic nitrogen, chloride, and silica. Notice the general spring runoff peaks during March and April with smaller peaks through the year representing storms during those months. 1977 was illustrated because of the large storm that occurred in December of that year. It should be noted that parameters whose concentrations decrease with increasing flow (soluble orthophosphate and chloride) still experience the maximum loading during the runoff period. However, they show about a twofold increase while total phosphorus shows a fourfold increase during high flow periods.

Figure 7 shows the yearly loading trends for all the parameters for the years 1970-1980. The curve labeled Detroit River is the loading at the mouth of the Detroit River. It represents the sources added to the Detroit/St. Clair Basin along the way from Lake Huron to the mouth of the Detroit River, plus the Lake Huron load. The Western Basin load is the sum of all sources to the Western Basin excluding the Detroit River. The Central Basin load does not include the input from the Western Basin and the Eastern Basin load does not include the input from the Central Basin.

The total phosphorus loading to the lake as a whole starts to decline sharply in from 1973 to 1980. This is due mainly to the sharp decrease in the sources to the Detroit Basin as can be seen in Figure 7a. The same general trend is exhibited in Figure 7b for orthophosphorus. The nitrogen species (Figures 7c, d, and e), show more variability with somewhat erratic behavior. This is especially true with the nitrogen loading components into the Western

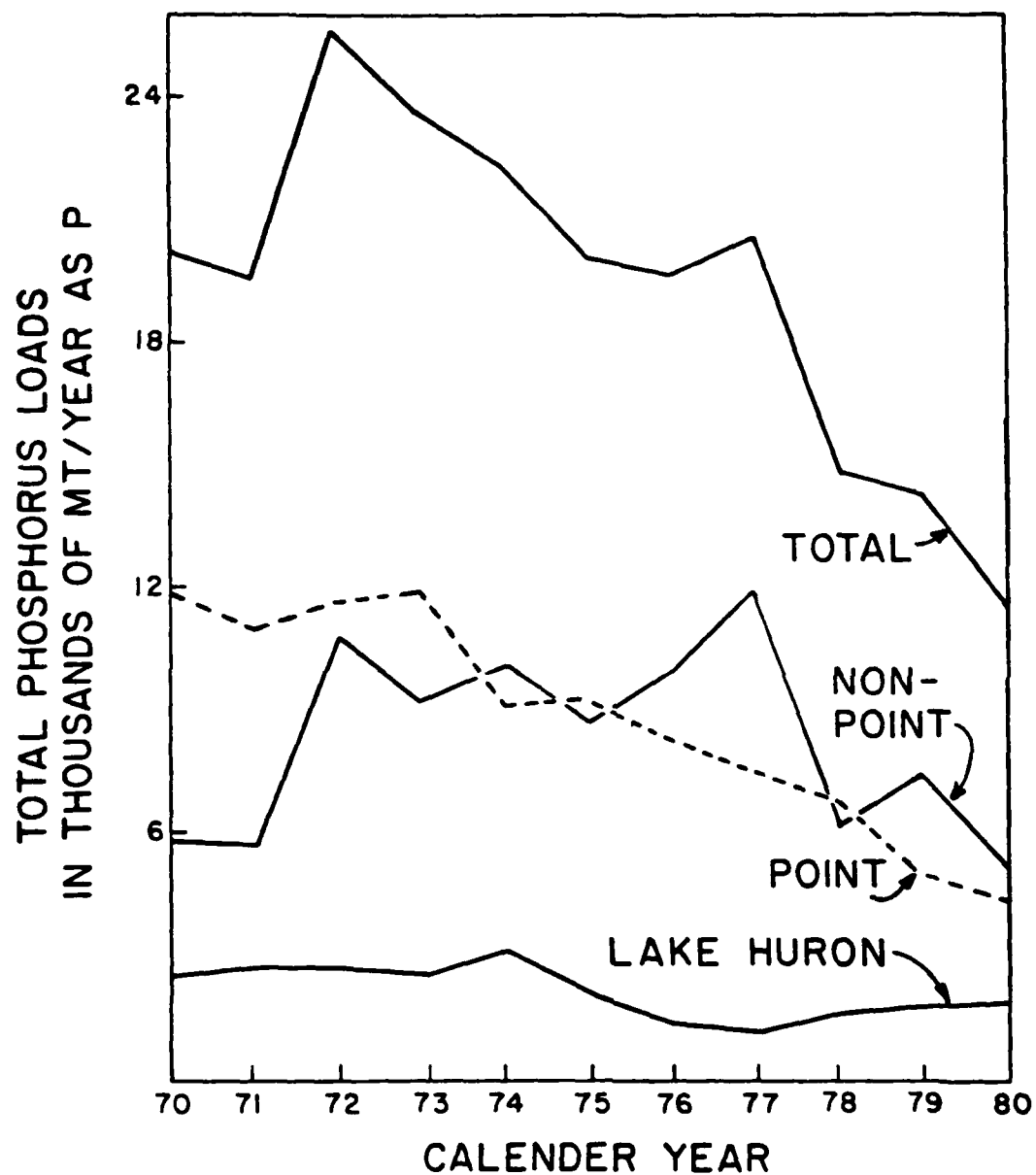


Figure 8 Total Phosphorus Loads to Lake Erie, 1970-1980; Point and Non-Point (Does not include shoreline erosion or atmospheric input.)

Basin of the lake including Lake Huron. It is interesting to note, however, that the values for nitrite-nitrate, ammonia, and organic nitrogen loadings remains relatively constant for the Eastern Basin of Lake Erie. Overall, the nitrogen loading into the lake has increased over the period. The chloride load to the lake has decreased from 1970 to 1980 due to the drop in the sources added to the Detroit River and a general decrease after 1976 for the Central Basin sources. Silica is sporadic like the nitrogen species, but does show a decrease in loading from 1975 on. This is basically due to large drop in the output from Lake Huron. It should be noted that the data for the St. Clair River is sparse of many years. Silica does show a seasonal variation and changes in the Lake Huron loading could be due to inadequate sampling.

Figure 8 shows the changes in the point and nonpoint total phosphorus loadings to the lake as a whole. Lake Huron output has remained relatively constant. Both point and nonpoint show a somewhat decreasing trend, point more so than nonpoint. Nonpoint is sensitive to rainfall and hydrology and can be expected to be more variable from year to year. In the last half of the 1970's there has been a general trend in reducing sewage treatment plant total phosphorus output.

THREE-BASIN LAKE ERIE TOTAL PHOSPHORUS MODEL

A three-basin total phosphorus model for Lake Erie, (Corps of Engineers 1975 and Rumer 1977) was used in conjunction with the total phosphorus loadings calculated from 1970 to 1980 to predict water quality changes over that period. The model is basically a six-compartment model with a water and sediment compartment for each basin. Inflow into each basin is equal to the

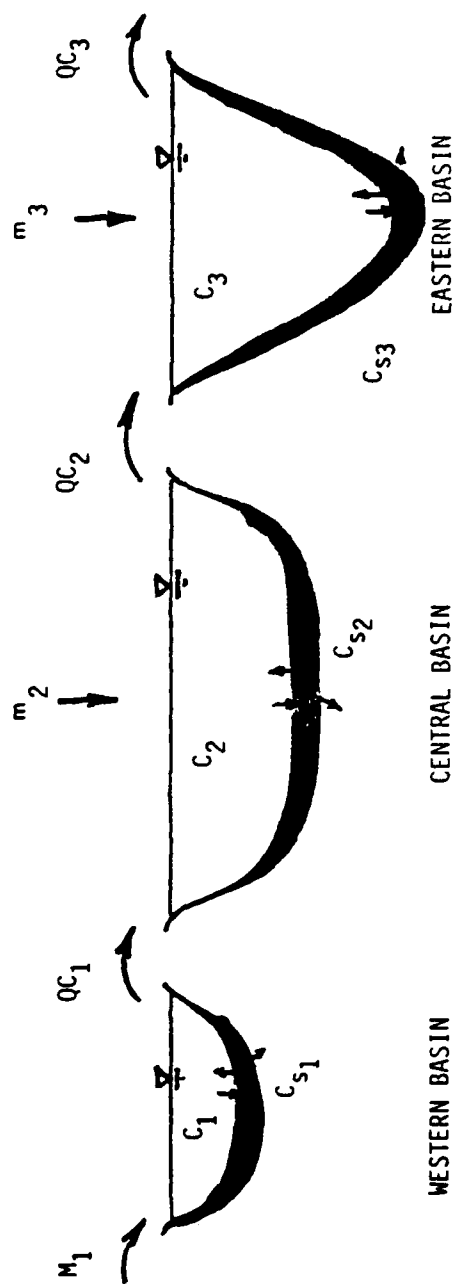


Figure 9 Three-Basin Total Phosphorus Budget Model for Lake Erie.

basin outflow. The water component is assumed to be continuously stirred and has a uniform total phosphorus concentration in each compartment. Figure 9 is a schematic showing the three basins and the processes taking place.

M_1 represents the tributary and Detroit River loading to the Western Basin, while M_2 and M_3 represent tributary loading to the other basins. C and C_s represent the total phosphorus concentrations in the water and sediment.

The material balance equation for phosphorus in the lake water can be written

$$\text{as: } \frac{dC}{dt} = \frac{M}{V} + \frac{K_2(C_3 - C)A}{V} - \frac{K_1CA}{V} - \frac{CQ}{V} \quad (1)$$

where V is the lake basin volume assumed constant in cubic meters and A is the sediment area in square meters. The quantity dC/dt represents the annual change in lake phosphorus concentration required to balance the phosphorus budget. If the basin is at equilibrium and the phosphorus loading is maintained at a constant, the lake phosphorus concentration remains unchanged and dC/dt equals zero.

The material balance equation for phosphorus in the sediment interstitial water is given by:

$$\frac{dC_s}{dt} = \frac{K_2(C_s - C)A}{V_s} + \frac{K_1CA}{V_s} - \frac{K_1K_3AC}{V_s} \quad (2)$$

Where V_s is the interstitial water volume. Again, for equilibrium conditions, the quantity dC_s/dt equals zero.

The above set of coupled equations can be solved for C and C_s as a function of time measured in years. The accuracy of the solution in quantitative

terms depends on the adequacy of the model formulation, correctness of the values chosen for the three rate constants (K_1 , K_2 , and K_3), adequate information on the phosphorus loading rate (M), and data on the lake characteristics (V , V_s , A , and Q). Initial values of C and C_s must also be known.

There is an equation for each concentration of the water and sediment compartments in each of the three basins. Five processes take place for each basin; a material transport to the basin, a material transport from the basin, a transport of phosphorus to the sediment, a transport from the sediment in the water and a permanent loss from the sediment. The last three processes are controlled by the reaction parameters K_1 , K_2 , and K_3 , respectively, which must be determined from existing data.

If equilibrium conditions between the total phosphorus concentration and the loading are assumed ($dC/dt = 0$), the following two equations are obtained which relate the three rate constants.

$$K_1 K_3 = \frac{M}{AC_e} - \frac{Q}{A} \quad (3)$$

$$K_2 = \frac{K_1(1-K_3)C_e}{C_{s_e} - C_e} \quad (4)$$

In this case, C_e and C_{s_e} are the steady-state or equilibrium values for lake and interstitial water concentrations, respectively. With knowledge of any one of the rate constants, the other two are specified by the above (3) and (4).

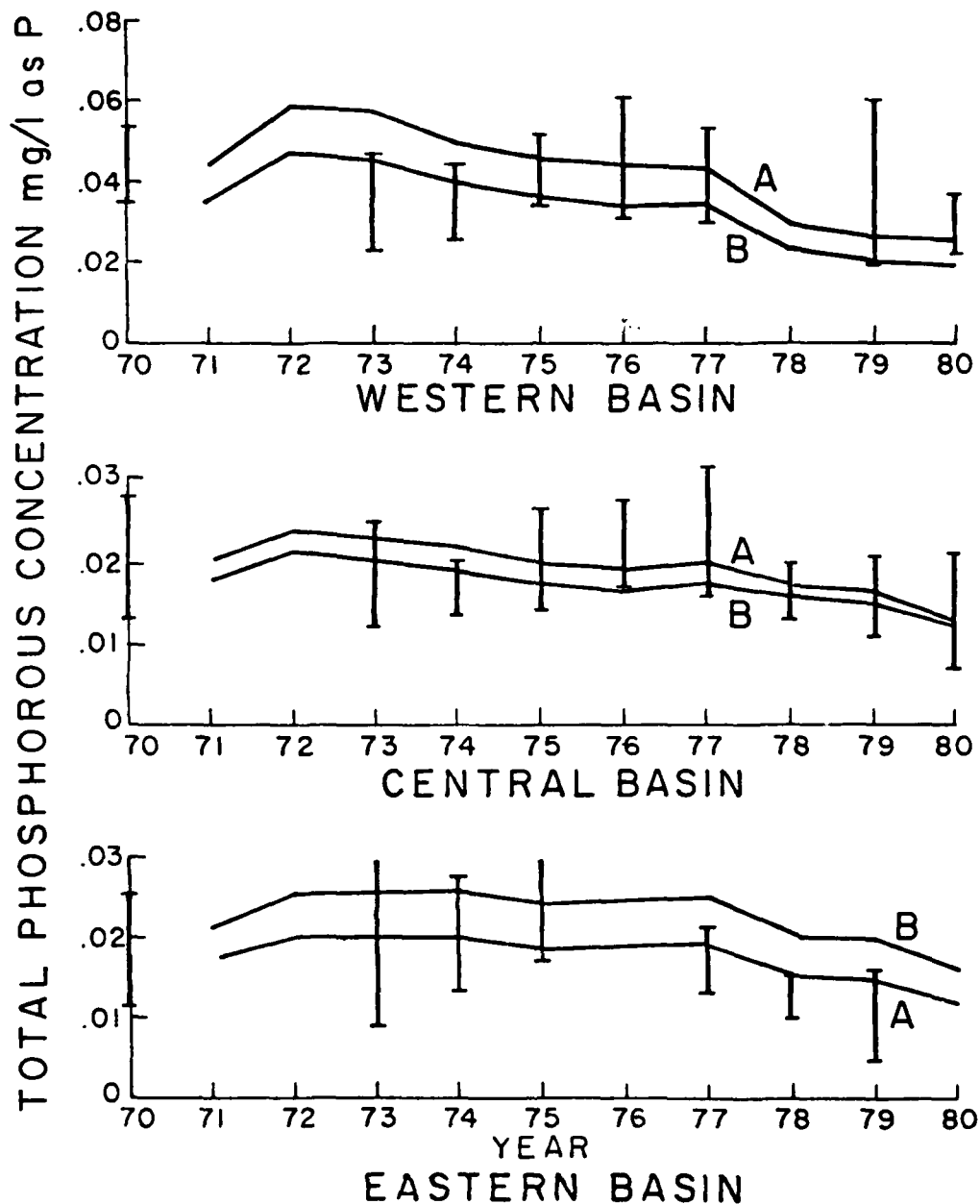


Figure 10 Lake Erie Total Phosphorus Concentrations
 A - Model Prediction for 1970 Loadings and Concentrations
 B - Model Prediction for Average 1970-1975 Loadings and Concentrations
 Data Points and Error Bars Showing ± 1 Standard Deviation from Actual Mean Concentrations Are Presented.

For illustrative purposes and to check calculated basin concentrations with field data, two sets of reaction parameters were calculated and used in this model. In both cases, the values for K_2 (transfer of phosphorus from sediment) were the same and these values were approximated from Project Hydro (Burns and Ross 1972) data as 1.0, 1.4, 1.0 m/yr for each of the basins. Using 1970 loadings and concentrations as equilibrium conditions, Case A parameters K_1 and K_3 were calculated as 59.1, 44.66, 30.63 m/yr and 0.872, 0.594, 0.620, respectively. Similarly for Case B where 1970-1975 average loadings and concentrations were used as equilibrium conditions, the parameters are 79.87, 45.23, 13.17 m/yr and 0.905, 0.565, 0.385. These two cases were then used with the 1970-1980 loadings to predict in-lake total phosphorus concentrations for each of the basins.

Figure 10 shows the model results plotted against measured in-lake total phosphorus concentrations. The plotted values with the bars are the ranges of the measured in-lake concentration which were reported by the Water Quality Board to IJC (1981) as measured by various agencies. As shown, the two cases predicted match the measured values fairly well. Only for the eastern basin after 1976 for Case B are the predicted concentrations outside the range for the measured data.

The lake loadings presented in the report (total phosphorus loads and the others) were also used to calibrate, verify, and predict lake concentrations for all the parameters using a much more sophisticated model. This model was developed for the USEPA at Manhattan College. Calibration and verification of the model was very good and the predicted concentrations agreed reasonably well with measured data (DiTore and Connolly).

CONCLUSIONS

Total phosphorus loads to Lake Erie have decreased during the period 1970-1980 as a result of phosphorus removal at wastewater treatment plants. The effect of these reductions can be seen in the lake concentrations and were predicted by a three-basin phosphorus budget model developed in the early 1970's. Soluble orthophosphate loads, chloride loads and silica loads have decreased over the period. Nitrogen species were highly variable and increased over the period.

REFERENCES

Baker, D. B. and Kramer, J. W., 1973. "Phosphorus Sources and Transport in an Agricultural River Basin of Lake Erie." Proceedings Sixteenth Conference on Great Lakes Research, International Association for Great Lakes Research, pp 858-871.

Baker, D. B., 1982 Fluvial Transport and Processing of Sediment and Nutrients in Large Agricultural River Basins. Technical Report Series, Lake Erie Wastewater Management Study, U. S. Army Corps of Engineers, Buffalo District, Buffalo, New York.

Burns, N. M. and C. Ross 1972 Project Hypo. USEPA Tech Report, TS-05-71-208-24, Canada Centre for Inland Waters, Paper No. 6, Ottawa, Canada.

Cahill, T. H., Imperato, P., and Verhoff, F. H. 1974. "Evaluation of Phosphorus Dynamics in a Watershed," Journal of the Environmental Engineering Division, ASCE, Vol. 100. No. EE2, Proc. Paper 10445, pp. 439-458.

DiToro, D. M. and J. P. Connolly, "Mathematical Models of Water Quality in Large Lakes, Part 2: Lake Erie," Manhattan College, Bronx, New York.

Federal Water Pollution Control Administration. 1968. Lake Erie South Shore Tributary Load Summary 1967. United States Department of Interior, Great Lakes Region, Cleveland, Ohio.

Great Lakes Water Quality Board. 1981. "1981 Report on Great Lakes Water Quality." Report to the International Joint Commission. Windsor, Ontario.

- Hetling, L. J., G. A. Carson and J. A. Bloomfield. 1976. "Estimation of the Optimal Sampling Interval in Assessing Water Quality of Streams." Environmental Modeling and Simulation. EPA 600/9-76-016. pp. 579-582.
- Rumer, R. R. 1978. "Methodology for Evaluation In-Lake Effect Resulting from Phosphorus Management in the Lake Erie Drainage Basin." Lake Erie Wastewater Management Study Technical Report. U.S. Army Corps of Engineers. Buffalo, New York. 1978.
- Treunert, E., A. Wilhelms, and H. Bernhardt. 1974. "Effect of the Sampling Frequency on the Determination of the Annual Phosphorus Load of Average Streams. Hydrochem. hyd. geol. Mitt. Vol I, pp. 175-198, 1974.
- U.S. Army Corps of Engineers. 1975. "Lake Erie Wastewater Management Study - Preliminary Feasibility Report." Vol 3, Buffalo, New York.
- U.S. Army Corps of Engineers. 1979. "Water Quality Data, Lake Erie Basin Tributary Mouth, Lake Erie Wastewater Management Study Tech Report." Buffalo, New York.
- U.S. Army Corps of Engineers. 1982. "Lake Erie Wastewater Management Study - Final Report." Buffalo, New York.
- Verhoff, F. H., S. M. Yaksich, and D. A. Melfi. 1980. River Nutrient and Chemical Transport Estimation. Journal of the Environmental Engineering Division. ASCE, Vol 106. No. EE3, pp. 591-608.
- Yaksich, S. M., D. A. Melfi, D. A. Baker and J. A. Kramer, "Lake Erie Nutrient Load, 1970-1980" Lake Erie Wastewater Management Study Technical Report, U.S. Army Corps of Engineers, Buffalo, New York, September 1982.

Yaksich, S. M. and F. H. Verhoff. Sampling Strategy for River Pollutant Transport. Journal of the Environmental Engineer Division, ASCE, Vol 109, No. EE1, pp. 3-8.

I

I

I

I

I

I

I

I

I

I

I

I

I

I

I

I

I

Appendix 1

Yearly Nutrient Loads to Lake Erie

1970-1980

This appendix presents a yearly summary for calculated nutrient loads to Lake Erie for the years 1970-1980. The presented loads are tributary loads only and do not account for shoreline erosion, atmospheric inputs, and sediment inputs. The loads are for total phosphorus as P, nitrite-nitrate nitrogen as N, ammonia nitrogen as N, organic nitrogen as N, chloride as Cl, and silica as SiO₂ and are broken down into components for the Detroit/St. Clair River Basin, the Western Basin, the Central Basin, and the Eastern Basin of Lake Erie. These are further divided into U.S. and Canadian point and non point, total point and non point, and total U.S. and Canadian loads.

 * YEARLY SUMMARY FOR *
 * 1970 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	NET/ST. CLK BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	2502	2389	1244	296	2502
US WGN POINT	307	27	210	608	4236
CANADIAN WGN POINT	966	2416	1454	904	1811
TOTAL WGN POINT	1273	1511	3035	538	6047
US POINT	6622	0	12	90	11706
CANADIAN POINT	91	1511	3047	628	193
TOTAL POINT	6713	3900	4279	634	11899
US TOTAL	6929	27	222	698	15942
CANADIAN TOTAL	1057	3927	4501	1532	2004
BASIN TOTAL	10488				20448
ORTHO PHOSPHORUS					
LAKE MURON	1129	309	123	1	1129
US WGN POINT	86	38	108	116	519
CANADIAN WGN POINT	244	347	231	117	506
TOTAL WGN POINT	330	685	1341	261	1025
US POINT	3319	0	10	47	5586
CANADIAN POINT	47	665	1351	368	104
TOTAL POINT	3566	974	1464	163	5690
US TOTAL	3405	36	116	425	6105
CANADIAN TOTAL	291	1012	1582		610
BASIN TOTAL	4625				7844
NITRATE-NITRITE NITROGEN					
LAKE MURON	37139	27103	13202	1886	37139
US WGN POINT	1486	1113	2473	3998	44177
CANADIAN WGN POINT	10564	28216	15675	5684	18153
TOTAL WGN POINT	12555	2177	3568	611	62330
US POINT	8306	0	36	408	14662
CANADIAN POINT	437	2177	3604	1059	921
TOTAL POINT	8743	29280	16770	2497	15583
US TOTAL	10292	1113	2509	4446	58039
CANADIAN TOTAL	11006	30393	19279	6943	19074
BASIN TOTAL	54437				115052
AMMONIA NITROGEN					
LAKE MURON	5516	655	1150	291	5516
US WGN POINT	249	48	163	110	2345
CANADIAN WGN POINT	466	703	1313	401	787
TOTAL WGN POINT	715	2227	4574	729	3132
US POINT	9413	0	43	304	16948
CANADIAN POINT	520	2227	4622	1033	867
TOTAL POINT	9933	2682	5729	1020	17815
US TOTAL	9662	48	206	414	19293
CANADIAN TOTAL	986	2930	5935	1434	1654
BASIN TOTAL	16164				26463

 *
 * YEARLY SUMMARY FOR *
 * 1970 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 *

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
LAKE MURON	46071	3483	1591	46071
US RUN POINT	1334	746	2146	9932
CANADIAN RUN POINT	2205	4109	3737	5260
TOTAL RUN POINT	3539	1875	203	15192
US POINT	2929	804	162	5811
CANADIAN POINT	155	0	329	329
TOTAL POINT	3084	804	365	6140
US TOTAL	4263	4368	1794	15743
CANADIAN TOTAL	2400	123	2308	5589
BASIN TOTAL	52734	4491	4102	67403
CHLORINE				
LAKE MURON	1153211	924932	20740	1153211
US RUN POINT	128113	22544	66743	1346083
CANADIAN RUN POINT	65968	947476	87463	163435
TOTAL RUN POINT	194081	119240	14743	1509516
US POINT	778650	932	11034	971552
CANADIAN POINT	1197462	120172	25777	1209428
TOTAL POINT	1976112	104172	55483	2180980
US TOTAL	906763	23476	7777	2317635
CANADIAN TOTAL	1263430	1067648	113260	1372863
BASIN TOTAL	3323404	1067648	113260	4843709
SILICA				
LAKE MURON	168290	33103	10471	168290
US RUN POINT	8757	3622	9555	108638
CANADIAN RUN POINT	11693	36725	20026	25575
TOTAL RUN POINT	20450	3590	460	134213
US POINT	6390	24	341	12195
CANADIAN POINT	330	3614	801	895
TOTAL POINT	6630	36693	10931	12090
US TOTAL	15057	3646	9896	120833
CANADIAN TOTAL	12023	40339	20827	26270
BASIN TOTAL	195370	40339	20827	315393

 *
 * YEARLY SUMMARY FOR *
 * 1971 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 *

	NET/ST.CLV BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	2784	1641	1111	259	2784
US MON POINT	374	28	203	676	3385
CANADIAN MON POINT	2251	1669	1314	935	3158
TOTAL MON POINT	2625	1202	2684	428	6543
US POINT	6564	0	12	88	10878
CANADIAN POINT	91	1202	2696	516	191
TOTAL POINT	6655	2843	3795	687	11069
US TOTAL	6938	28	215	764	14263
CANADIAN TOTAL	2342	2871	4010	1451	3349
BASEIN TOTAL	12064				20396

ORTHO PHOSPHORUS					
LAKE MURON	993	216	110	1	993
US MON POINT	101	37	98	122	428
CANADIAN MON POINT	211	253	208	123	468
TOTAL MON POINT	312	584	1189	210	896
US POINT	3287	0	6	47	5270
CANADIAN POINT	47	584	1195	257	100
TOTAL POINT	3334	800	1299	211	5370
US TOTAL	3388	37	104	169	568
CANADIAN TOTAL	258	837	1403	300	568
BASEIN TOTAL	4639				7259

NITRATE-NITRICE NITROGEN					
LAKE MURON	37573	20850	9552	1418	37573
US MON POINT	2725	1110	2280	3789	34545
CANADIAN MON POINT	8951	21960	11832	5207	16130
TOTAL MON POINT	11676	1963	3659	575	50875
US POINT	8208	0	36	450	14805
CANADIAN POINT	437	1963	3695	1025	923
TOTAL POINT	8645	22813	13211	1993	15328
US TOTAL	10933	1110	2316	4239	48950
CANADIAN TOTAL	4388	23923	15527	6232	17053
BASEIN TOTAL	57894				103576

AMMONIA NITROGEN					
LAKE MURON	4218	452	1063	209	4218
US MON POINT	299	49	168	125	2023
CANADIAN MON POINT	417	501	1231	334	759
TOTAL MON POINT	716	1887	3687	675	2782
US POINT	9354	0	42	280	15603
CANADIAN POINT	513	1887	3729	555	835
TOTAL POINT	9667	2339	4750	884	16838
US TOTAL	9653	49	210	405	17826
CANADIAN TOTAL	930	2388	4960	1289	1594
BASEIN TOTAL	14801				23430

 * YEARLY SUMMARY FOR *
 * 1971 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC NITROGEN					
LAKE MURON	45603	2812	2755	1065	45603
US NON POINT	1620	120	663	2149	8252
CANADIAN NON POINT	2075	2932	3418	3214	5007
TOTAL NON POINT	3695	725	1399	5363	13259
US POINT	2897	0	12	162	5212
CANADIAN POINT	155	725	1411	353	329
TOTAL POINT	3052	3537	4154	1256	5581
US TOTAL	4517	120	675	2311	13464
CANADIAN TOTAL	2230	3657	4829	3567	5336
BASIN TOTAL	52350				64003
CHLORIDE					
LAKE MURON	1047834	211066	680650	15830	1047834
US NON POINT	121466	8151	20306	58237	1029012
CANADIAN NON POINT	63360	219217	700956	74067	150054
TOTAL NON POINT	184826	55830	114318	13906	1179066
US POINT	773652	0	923	11033	957706
CANADIAN POINT	1197462	55830	115241	24939	1209418
TOTAL POINT	1971114	266894	790968	29734	2167124
US TOTAL	495118	8151	21229	69270	1986718
CANADIAN TOTAL	1260822	275047	816197	99006	1359472
BASIN TOTAL	3203774				4394024
SILICA					
LAKE MURON	178411	42579	26319	8152	178411
US NON POINT	9727	700	3301	9425	86777
CANADIAN NON POINT	9770	43279	29620	17577	23196
TOTAL NON POINT	19497	1775	3451	436	109973
US POINT	6272	0	24	341	11934
CANADIAN POINT	330	1775	3475	777	695
TOTAL POINT	6602	44354	29770	4588	12629
US TOTAL	15999	700	3325	9766	98711
CANADIAN TOTAL	10100	45054	33095	18354	23891
BASIN TOTAL	260510				301013

 *
 * YEARLY SUMMARY FOR *
 * 1972 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 *

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	2761	5551	1965	458	2761
US NON POINT	354	29	312	1105	8328
CANADIAN NON POINT	1412	5580	2277	1563	2858
TOTAL NON POINT	1766	1538	2694	339	11186
US POINT	7015	0	12	90	11586
CANADIAN POINT	91	1538	2706	429	193
TOTAL POINT	7106	7089	4659	797	11779
US TOTAL	7369	7118	324	1195	19914
CANADIAN TOTAL	1503		4983		3051
Basin Total	11633			1992	25726

ORTHO PHOSPHORUS

LAKE HURON	1194	626	222	24	1194
US NON POINT	109	39	142	169	981
CANADIAN NON POINT	345	665	364	193	695
TOTAL NON POINT	454	750	1195	166	1676
US POINT	3515	0	11	47	3626
CANADIAN POINT	48	750	1206	213	106
TOTAL POINT	3563	1376	1417	190	5732
US TOTAL	3624	39	153	216	6607
CANADIAN TOTAL	393	1415	1570	406	801
Basin Total	5211				8602

NITRATE-NITRITE NITROGEN

LAKE HURON	37690	51654	22441	2074	37690
US NON POINT	2960	1118	3074	5531	79129
CANADIAN NON POINT	15734	52772	25515	7605	25457
TOTAL NON POINT	18694	2271	3863	625	104586
US POINT	8609	0	36	457	15408
CANADIAN POINT	438	2271	3899	1082	931
TOTAL POINT	9047	53925	26304	2699	16339
US TOTAL	11609	1118	3110	5988	94537
CANADIAN TOTAL	16172	55043	29414	8687	26388
Basin Total	65471				158615

AMMONIA NITROGEN

LAKE HURON	2501	635	1569	335	2501
US NON POINT	313	51	254	176	2052
CANADIAN NON POINT	692	686	1623	511	1173
TOTAL NON POINT	1005	2482	4244	753	4025
US POINT	9638	0	45	346	17317
CANADIAN POINT	527	2482	4269	1099	918
TOTAL POINT	10365	3117	5813	1088	18235
US TOTAL	10151	51	299	522	20169
CANADIAN TOTAL	1219	3168	6112	1610	2091
Basin Total	13871				24761

 * YEARLY SUMMARY FOR *
 * 1972 *
 * BASIN LOADING IN METRIC TONS PER YEAR *

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC NITROGEN					
LAKE MURDO	35046	6310	5207	1964	35046
US NON POINT	1820	123	1035	2683	15301
CANADIAN NON POINT	3122	6433	6242	4647	6963
TOTAL NON POINT	4942	850	1495	211	22264
US POINT	3655	0	12	163	5611
CANADIAN POINT	155	850	1507	374	330
TOTAL POINT	3210	7160	6702	2175	5941
US TOTAL	4875	123	1047	2846	20912
CANADIAN TOTAL	3277	7263	7749	5021	7293
BASIN TOTAL	43194				63251
CHLORIDE					
LAKE MURDO	1092842	376909	1124626	22558	1092842
US NON POINT	184211	8252	28375	73219	1708304
CANADIAN NON POINT	89804	385161	1153001	95777	199650
TOTAL NON POINT	274015	61309	121337	15185	1907954
US POINT	804539	0	943	11040	1002370
CANADIAN POINT	1197461	61309	122280	24225	1209844
TOTAL POINT	2002000	438218	1245963	37743	2211814
US TOTAL	984750	8252	29318	84259	2710674
CANADIAN TOTAL	1287245	446470	1275281	122002	1409094
BASIN TOTAL	3368957				5212610
SILICA					
LAKE MURDO	181874	101996	49397	11409	181874
US NON POINT	11442	718	5112	12517	174244
CANADIAN NON POINT	16573	102714	54509	23926	34920
TOTAL NON POINT	28015	1914	3648	474	209164
US POINT	6552	0	24	342	12568
CANADIAN POINT	330	1914	3672	816	696
TOTAL POINT	6882	103910	53045	11843	13284
US TOTAL	17994	718	5136	12959	186432
CANADIAN TOTAL	16903	104628	50181	24742	35616
BASIN TOTAL	216771				404322

 * YEARLY SUMMARY FOR *
 * 1973 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	2565	4059	1499	224	2565
US NON POINT	524	35	317	1038	6306
CANADIAN NON POINT	1866	4094	1816	1262	3256
TOTAL NON POINT	2390	1164	2161	345	9562
US POINT	8123	0	12	90	11793
CANADIAN POINT	91	1164	2173	435	193
TOTAL POINT	8214	5223	3660	569	11986
US TOTAL	8647	35	329	1128	18099
CANADIAN TOTAL	1957	5258	3989	1697	3409
BASIN TOTAL	13169				24113
ORTHO PHOSPHORUS					
LAKE HURON	1059	584	170	1	1059
US NON POINT	160	42	134	160	915
CANADIAN NON POINT	406	626	304	161	762
TOTAL NON POINT	566	557	950	166	1677
US POINT	4068	0	10	47	5741
CANADIAN POINT	47	557	960	213	104
TOTAL POINT	4115	1141	1120	167	5845
US TOTAL	4224	42	144	227	6656
CANADIAN TOTAL	453	1183	1264	394	866
BASIN TOTAL	5740				8581
NITRATE-NITRITE NITROGEN					
LAKE HURON	47497	40887	17334	1620	47497
US NON POINT	5039	1509	3446	6014	64880
CANADIAN NON POINT	17609	42396	20780	7634	28578
TOTAL NON POINT	22648	2290	3422	635	93458
US POINT	10220	0	36	456	16987
CANADIAN POINT	437	2290	3878	1091	929
TOTAL POINT	10657	43177	21176	2255	17916
US TOTAL	15259	1509	3442	6470	81867
CANADIAN TOTAL	18046	44686	24658	8725	29507
BASIN TOTAL	40802				150871
AMMONIA NITROGEN					
LAKE HURON	3153	1032	1380	231	3153
US NON POINT	475	54	249	178	3118
CANADIAN NON POINT	906	1086	1629	409	1387
TOTAL NON POINT	1381	2501	4030	757	4505
US POINT	11762	0	44	369	19050
CANADIAN POINT	520	2501	4074	1126	933
TOTAL POINT	12282	3533	5410	988	19983
US TOTAL	12237	54	293	547	22168
CANADIAN TOTAL	1426	3587	5703	1535	2320
BASIN TOTAL	16616				27641

 * YEARLY SUMMARY FOR *
 * 1973 *
 * BASIN LOADING IN METRIC TONS PER YEAR *

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC NITROGEN					
LAKE MUPON	46444	5930	4280	1210	46444
US FOR POINT	2894	157	1047	2700	14314
CANADIAN FOR POINT	3474	6047	5327	3910	7782
TOTAL FOR POINT	6772	835	1487	210	22096
US POINT	3611	0	12	162	6143
CANADIAN POINT	155	835	1499	372	329
TOTAL POINT	3766	835	1511	534	6472
US TOTAL	4505	6765	5767	1420	20857
CANADIAN TOTAL	4033	157	1059	811	6011
BASIN TOTAL	54982	6922	6826	4282	75012

CHLORIDE

LAKE MUPON	1442674	343247	981826	17586	1442674
US FOR POINT	316742	9715	28341	8154	1699401
CANADIAN FOR POINT	102764	302962	1010167	99170	222404
TOTAL FOR POINT	419506	59951	122576	15425	1921805
US POINT	852781	0	939	11034	1050733
CANADIAN POINT	1197462	59951	123515	26459	1209435
TOTAL POINT	2050243	43194	110402	33011	2260168
US TOTAL	1169523	9715	29280	92618	2750134
CANADIAN TOTAL	1304226	452913	1133662	125629	1431839
BASIN TOTAL	3912423				5624647

SILICA

LAKE MUPON	168463	81679	40249	9013	168463
US FOR POINT	16671	869	5017	13534	147612
CANADIAN FOR POINT	18734	82544	45266	22547	38158
TOTAL FOR POINT	35405	1903	3638	484	185766
US POINT	7748	0	24	341	13773
CANADIAN POINT	330	1903	3662	825	695
TOTAL POINT	8078	83522	43887	9497	14468
US TOTAL	24419	869	5041	13675	161305
CANADIAN TOTAL	19064	84451	48928	23372	38849
BASIN TOTAL	231946				388697

 * YEARLY SUMMARY FOR *
 * 1974 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	HET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	3122	4007	1939	308	3122
US MON POINT	571	32	322	1333	6825
CANADIAN MON POINT	1855	4039	2261	1641	3542
TOTAL MON POINT	2426	869	1955	317	10367
US POINT	5783	0	12	89	8924
CANADIAN POINT	91	869	1967	406	192
TOTAL POINT	5874	869	3894	625	9116
US TOTAL	6354	4876	334	1422	15749
CANADIAN TOTAL	1946	32	4228	3734	3734
BASIN TOTAL	11422	4908		2047	22605

ORTHOPHOSPHORUS					
LAKE HURON	739	625	217	1	739
US MON POINT	165	40	135	187	1006
CANADIAN MON POINT	397	665	352	186	759
TOTAL MON POINT	562	419	849	154	1767
US POINT	2697	0	9	47	4319
CANADIAN POINT	47	419	858	201	103
TOTAL POINT	2944	1044	1066	155	4422
US TOTAL	3062	40	144	234	5327
CANADIAN TOTAL	444	1084	1210	389	662
BASIN TOTAL	4245				6928

NITRATE-NITRILE NITROGEN					
LAKE HURON	52834	35945	15627	1609	52834
US MON POINT	5295	1343	3340	6037	58676
CANADIAN MON POINT	17438	37288	19167	7646	28156
TOTAL MON POINT	22733	2247	3757	599	86834
US POINT	9182	0	36	454	16385
CANADIAN POINT	437	2247	3793	1053	927
TOTAL POINT	10219	38192	19584	2208	17312
US TOTAL	15077	1343	3376	6491	75061
CANADIAN TOTAL	17675	35535	22960	8699	29085
BASIN TOTAL	85786				156980

AMMONIA NITROGEN					
LAKE HURON	3483	1391	1778	240	3483
US MON POINT	493	46	239	226	3902
CANADIAN MON POINT	668	1437	2017	466	1379
TOTAL MON POINT	1361	2316	3799	709	5281
US POINT	11240	0	45	340	18064
CANADIAN POINT	522	2316	3844	1049	907
TOTAL POINT	11762	3707	5577	949	18971
US TOTAL	11733	46	5861	566	21966
CANADIAN TOTAL	1390	3753		284	2286
BASIN TOTAL	16606			1515	27735

 *
 * YEARLY SUMMARY FOR
 * 1974
 *
 * RASIN LOADING IN METRIC TONS PER YEAR
 *
 *

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC NITROGEN					
LAKE MURON	45822	6223	4639	1321	45822
US HCN POINT	3055	144	1069	2962	15238
CANADIAN HCN POINT	3767	6367	5708	4283	7942
TOTAL HCN POINT	6622	815	1489	5959	23180
US POINT	3457	0	12	162	329
CANADIAN POINT	155	815	1501	360	6268
TOTAL POINT	3612	7038	6128	1519	21197
US TOTAL	6512	144	1081	3124	8271
CANADIAN TOTAL	3922	7182	7209	4643	75290
RASIN TOTAL	56256				
CHLORIDE					
LAKE MURON	1264639	401224	952261	17748	1264639
US HCN POINT	323275	8887	28324	80607	1694508
CANADIAN HCN POINT	104048	410111	980585	98355	221866
TOTAL HCN POINT	427323	60469	122270	14521	1916374
US POINT	826119	0	937	11034	1023379
CANADIAN POINT	1197462	60469	123207	25555	1209433
TOTAL POINT	2023581	461693	1074531	32269	2232812
US TOTAL	1149394	8887	29261	91641	2717887
CANADIAN TOTAL	1301510	470580	1103792	123910	1431299
RASIN TOTAL	3715543				5413825
SILICA					
LAKE MURON	186742	67464	41897	9049	186742
US HCN POINT	17475	790	5058	14282	135885
CANADIAN HCN POINT	17773	68254	46955	23331	37903
TOTAL HCN POINT	35248	1929	3614	456	173788
US POINT	7419	0	24	341	13418
CANADIAN POINT	330	1929	3638	797	695
TOTAL POINT	7749	69393	45511	9505	14113
US TOTAL	24894	790	5082	14623	149303
CANADIAN TOTAL	18103	70183	50593	24128	38598
RASIN TOTAL	229739				374643

 *
 * YEARLY SUMMARY FOR *
 * 1975 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 *

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	2022	3486	1595	298	2022
US NON POINT	485	35	361	999	5664
CANADIAN NON POINT	1744	3521	1956	1297	3139
TOTAL NON POINT	2229	885	1870	272	9003
US POINT	6024	0	12	89	9051
CANADIAN POINT	91	885	1882	361	192
TOTAL POINT	6115	4371	3465	570	9243
US TOTAL	6509	35	1088	331	14915
CANADIAN TOTAL	1835	4406	1658		3331
BASIN TOTAL	10366				20260

ORTHO PHOSPHORUS

LAKE MURUM	538	643	178	0	538
US NON POINT	147	45	158	164	960
CANADIAN NON POINT	387	688	336	164	754
TOTAL NON POINT	534	437	600	132	1722
US POINT	3010	0	12	47	4379
CANADIAN POINT	47	437	812	179	106
TOTAL POINT	3057	1080	978	132	4485
US TOTAL	3157	45	170	211	5347
CANADIAN TOTAL	434	1125	1140	343	860
BASIN TOTAL	4129				6745

NITRATE-NITRITE NITROGEN

LAKE MURUM	47672	37145	13354	1751	47672
US NON POINT	4873	1338	3568	5450	57123
CANADIAN NON POINT	18233	38483	16922	7201	28589
TOTAL NON POINT	23106	2338	3435	599	05712
US POINT	10608	0	36	456	16980
CANADIAN POINT	437	2338	3471	1055	929
TOTAL POINT	11045	39483	16789	2350	17909
US TOTAL	15481	1338	3604	5906	74103
CANADIAN TOTAL	18670	40821	20393	8256	29518
BASIN TOTAL	81823				151293

AMMONIA NITROGEN

LAKE MURUM	2126	794	1671	229	2126
US NON POINT	460	47	271	158	3159
CANADIAN NON POINT	819	846	1942	387	1295
TOTAL NON POINT	1279	2513	4059	715	4854
US POINT	12243	0	48	342	19330
CANADIAN POINT	527	2513	4107	1057	917
TOTAL POINT	12770	3312	5730	944	20447
US TOTAL	12703	47	319	500	22689
CANADIAN TOTAL	1346	3359	6049	1444	2212
BASIN TOTAL	16175				27027

 * YEARLY SUMMARY FOR *
 * 1975 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	NET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC NITROGEN					
LAKE HURON	33271	4519	4209	1270	33271
US NON POINT	2876	148	1162	2636	12874
CANADIAN NON POINT	3784	4667	5371	3906	7690
TOTAL NON POINT	6620	886	1470	198	20564
US POINT	3745	0	12	162	6299
CANADIAN POINT	155	886	1482	360	329
TOTAL POINT	3900	5405	5679	1468	6628
US TOTAL	6621	148	1174	2798	19173
CANADIAN TOTAL	3899	5553	6853	4266	8019
BASIN TOTAL	43791				60463
CHLORIDE					
LAKE HURON	1088065	370283	1147344	19355	1088065
US NON POINT	281175	9170	32104	79094	1818157
CANADIAN NON POINT	103802	379453	1179448	98449	224170
TOTAL NON POINT	344977	62097	120966	14521	2042327
US POINT	859191	0	940	11034	14521
CANADIAN POINT	1197462	62097	121906	25555	1209436
TOTAL POINT	2056653	432380	1268310	33876	2266211
US TOTAL	1140366	9170	33044	90128	2874932
CANADIAN TOTAL	1301264	441550	1301354	124004	1433606
BASIN TOTAL	3529695				5306603
SILICA					
LAKE HURON	206058	76037	38165	9765	206058
US NON POINT	16640	818	5736	12657	140807
CANADIAN NON POINT	18556	76855	43901	22422	37767
TOTAL NON POINT	35396	1940	3566	456	178574
US POINT	4042	0	24	341	14004
CANADIAN POINT	330	1940	3590	797	695
TOTAL POINT	8372	77977	41731	10221	14699
US TOTAL	24482	818	5760	12658	154811
CANADIAN TOTAL	18886	76795	47491	23219	38462
BASIN TOTAL	249826				399331

 YEARLY SUMMARY FOR
 1976
 BASIN LOADING IN METRIC TONS PER YEAR

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	1373	3361	1724	625	1373
US NON POINT	404	50	448	1343	6114
CANADIAN NON POINT	2465	3411	2172	1968	4306
TOTAL NON POINT	2869	632	1408	258	10420
US POINT	5739	0	12	211	8037
CANADIAN POINT	84	632	1420	373	211
TOTAL POINT	5623	3993	3132	883	8248
US TOTAL	6143	50	460	1458	14151
CANADIAN TOTAL	2549	4043	3592	2341	4517
BASIN TOTAL	10665				20061
ORTHOPHOSPHORUS					
LAKE MURON	647	581	357	35	647
US NON POINT	106	77	204	194	1079
CANADIAN NON POINT	479	658	561	229	954
TOTAL NON POINT	585	313	637	129	2033
US POINT	2159	0	0	59	3238
CANADIAN POINT	43	313	637	188	102
TOTAL POINT	2202	894	994	164	3340
US TOTAL	2265	77	204	253	4317
CANADIAN TOTAL	522	971	1198	417	1056
BASIN TOTAL	3434				6020
NITRATE-NIT-ITE NITROGEN					
LAKE MURON	43067	24554	10888	2308	43067
US NON POINT	5071	1598	4023	7281	42821
CANADIAN NON POINT	21825	26152	14911	9589	34527
TOTAL NON POINT	26896	2070	2796	787	77346
US POINT	2035	36	48	629	7688
CANADIAN POINT	648	2106	2844	1416	1361
TOTAL POINT	2683	26624	13684	3095	9044
US TOTAL	7106	1634	4071	7910	50509
CANADIAN TOTAL	22273	28258	17755	11005	35888
BASIN TOTAL	72406				129464
AMMONIA NITROGEN					
LAKE MURON	1829	1177	2206	428	1829
US NON POINT	492	63	324	183	4303
CANADIAN NON POINT	1040	1240	2530	611	1610
TOTAL NON POINT	1532	2380	5521	907	5913
US POINT	16030	48	56	435	24038
CANADIAN POINT	732	2428	5577	1342	1271
TOTAL POINT	16762	3557	7727	1335	26109
US TOTAL	16522	111	380	1953	29141
CANADIAN TOTAL	1772	3668	8107	2881	618
BASIN TOTAL	20123				33851

 * YEARLY SUMMARY FOR *
 * 1976 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	DE/ST, CLP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC NITROGEN					
LAKE HURON	43055		4368		43055
US NON POINT	2911	5233	1299	2285	14797
CANADIAN NON POINT	4657	168	5667	3082	9206
TOTAL NON POINT	7568	5001	6866	5367	24003
US POINT	5873	813	1614	275	8575
CANADIAN POINT	215	12	12	223	462
TOTAL POINT	6088	825	1626	498	9037
US TOTAL	8784	6046	5982	2560	23372
CANADIAN TOTAL	4872	180	1311	3305	9668
BASIN TOTAL	56711	6226	7293	5865	76095
CHLORIDE					
LAKE HURON	1150741		1046388		1150741
US NON POINT	315116	319156	32896	25854	1706514
CANADIAN NON POINT	126280	9456	1079284	93318	261950
TOTAL NON POINT	441396	328612	1187268	119172	1968464
US POINT	790347	58176	112326	19032	979681
CANADIAN POINT	1201554	931	1170	15305	1218960
TOTAL POINT	1991901	59107	113496	34337	2198441
US TOTAL	1105463	377332	1158714	44866	2606395
CANADIAN TOTAL	1327834	10387	34066	108623	1480910
BASIN TOTAL	3584038	387719	1192780	153509	5318046
SILICA					
LAKE HURON	104389		33808		104389
US NON POINT	16697	49910	6214	12359	112774
CANADIAN NON POINT	22094	889	40022	16336	45733
TOTAL NON POINT	38791	50799	46236	28695	156507
US POINT	8040	1925	3509	593	14067
CANADIAN POINT	222	24	36	481	763
TOTAL POINT	8262	1949	3545	1074	14830
US TOTAL	24737	51835	37317	12952	126041
CANADIAN TOTAL	22316	913	6250	17017	46496
BASIN TOTAL	151442	52748	43567	29969	277726

 * YEARLY SUMMARY FOR *
 * 1977 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

DET/ST-CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
LAKE MURON	1187	2194	783	1187
US NCA POINT	179	4620	1177	7736
CANADIAN NCA POINT	2501	67	4174	4174
TOTAL NCA POINT	2680	4687	1920	11910
US POINT	4331	823	282	7164
CANADIAN POINT	119	0	107	230
TOTAL POINT	4450	823	369	7402
US TOTAL	4510	5403	1025	14900
CANADIAN TOTAL	2620	67	441	4412
BASIN TOTAL	8517	5510	2309	20499

TOTAL PHOSPHORUS

OMTMO PHOSPHORUS

LAKE MURON	558
US NCA POINT	53
CANADIAN NCA POINT	464
TOTAL NCA POINT	517
US POINT	1753
CANADIAN POINT	60
TOTAL POINT	1813
US TOTAL	1806
CANADIAN TOTAL	524
BASIN TOTAL	2888

NITRATE-NITRITE NITROGEN

LAKE MURON	37214
US NCA POINT	3005
CANADIAN NCA POINT	20762
TOTAL NCA POINT	23767
US POINT	1760
CANADIAN POINT	921
TOTAL POINT	2681
US TOTAL	4765
CANADIAN TOTAL	21683
BASIN TOTAL	63662

AMMONIA NITROGEN

LAKE MURON	1579
US NCA POINT	312
CANADIAN NCA POINT	829
TOTAL NCA POINT	1141
US POINT	13558
CANADIAN POINT	907
TOTAL POINT	14465
US TOTAL	13670
CANADIAN TOTAL	1736
BASIN TOTAL	17185

 * YEARLY SUMMARY FOR *
 * 1977 *
 * HASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	DET/ST,CLR HASIN	WESTERN HASIN	CENTRAL BASIN	EASTERN HASIN	TOTAL
ORGANIC NITROGEN					
LAKE MURON	37204	16156	10135	2208	37204
US NON POINT	4257	171	1212	2904	32836
CANADIAN NON POINT	4693	16327	11347	5192	8980
TOTAL NON POINT	8950	928	1071	317	41816
US POINT	4950	12	12	198	7866
CANADIAN POINT	329	940	1683	515	581
TOTAL POINT	5279	17084	11806	2605	8417
US TOTAL	9207	183	1224	3102	40702
CANADIAN TOTAL	5022	17267	13030	5707	9511
HASIN TOTAL	51433				87437
CHLORINE					
LAKE MURON	994361	291946	411306	30611	994361
US NON POINT	177560	10210	33610	87450	911423
CANADIAN NON POINT	113156	302156	444916	118061	244426
TOTAL NON POINT	290716	65454	117297	21614	1155849
US POINT	758496	468	1119	1340	962061
CANADIAN POINT	1209154	65922	118416	35154	1224281
TOTAL POINT	1967650	357400	528603	58225	2187142
US TOTAL	936056	10678	34729	100990	1874204
CANADIAN TOTAL	1322310	368070	563332	153215	1468707
BASIN TOTAL	3252727				4337352
SILICA					
LAKE MURON	90204	43237	41481	9993	90204
US NON POINT	11290	956	5968	15009	106001
CANADIAN NON POINT	22158	48193	47449	25002	88091
TOTAL NON POINT	33448	2055	3662	675	150092
US POINT	6404	12	36	424	13196
CANADIAN POINT	695	2067	3698	1099	1167
TOTAL POINT	7499	45292	45143	10668	14363
US TOTAL	18094	968	6004	15433	119197
CANADIAN TOTAL	22853	46260	51147	26101	45258
HASIN TOTAL	131151				234659

 * YEARLY SUMMARY FOR *
 * 1978 *
 * BASIN LOADING IN METRIC TONS PER YEAR *

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MICHIGAN	1613	2228	2091	239	1613
US NON POINT	437	38	376	407	4985
CANADIAN NON POINT	564	2266	2417	646	1385
TOTAL NON POINT	1001	740	2694	262	6330
US POINT	3012	0	12	84	6703
CANADIAN POINT	183	740	2701	306	279
TOTAL POINT	3195	2968	4730	501	6982
US TOTAL	3489	38	388	491	11648
CANADIAN TOTAL	747	3006	5118	992	1684
BASIN TOTAL	5809				14925
ORTHOPHOSPHORUS					
LAKE MICHIGAN	657	614	310	10	657
US NON POINT	132	16	115	109	1066
CANADIAN NON POINT	245	630	425	119	485
TOTAL NON POINT	377	360	1330	131	1551
US POINT	91	0	11	45	3236
CANADIAN POINT	1506	360	1341	176	147
TOTAL POINT	1597	974	1640	141	3383
US TOTAL	336	16	126	154	4302
CANADIAN TOTAL	2540	990	1766	295	632
BASIN TOTAL					5591
NITRATE-NITRITE-NITROGEN					
LAKE MICHIGAN	43639	25192	12742	1713	43639
US NON POINT	2239	1537	3970	5596	41886
CANADIAN NON POINT	10531	26729	16712	7309	21634
TOTAL NON POINT	12770	2034	3048	778	63520
US POINT	3816	36	48	563	9676
CANADIAN POINT	7275	2070	3096	1301	7922
TOTAL POINT	11091	27226	15790	2491	17598
US TOTAL	6055	1573	4018	6159	51562
CANADIAN TOTAL	17606	24799	19808	8650	29556
BASIN TOTAL	67500				124757
AMMONIA NITROGEN					
LAKE MICHIGAN	1779	1871	435	139	1779
US NON POINT	117	54	259	157	2562
CANADIAN NON POINT	400	1925	694	296	870
TOTAL NON POINT	517	2380	5583	897	3432
US POINT	12197	47	59	349	21057
CANADIAN POINT	1742	2427	5642	1206	2197
TOTAL POINT	13939	4251	6018	1036	23254
US TOTAL	12314	101	316	506	23619
CANADIAN TOTAL	2142	4352	6336	1542	3067
BASIN TOTAL	14235				28465

 * YEARLY SUMMARY FOR *
 * 1978 *
 * BASIN LOADING IN METRIC TONS PER YEAR *

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC NITROGEN					
LAKE MURON	43673	8622	9641	958	43673
US MUY POINT	989	116	984	2077	20410
CANADIAN MUY POINT	2619	8938	10625	3035	5796
TOTAL MUY POINT	3608	879	1797	274	26206
US POINT	5257	12	12	198	2007
CANADIAN POINT	2585	891	1809	472	11014
TOTAL POINT	7842	9701	11438	1232	28617
US TOTAL	6246	128	996	2275	8603
CANADIAN TOTAL	5204	9829	12434	3507	80893
BASIN TOTAL	55123				
CHLORINE					
LAKE MURON	1007387	239695	196756	17204	1007387
US MUY POINT	170871	8995	26412	58614	624526
CANADIAN MUY POINT	49540	248690	223168	76018	143761
TOTAL MUY POINT	220411	63711	123679	18073	768287
US POINT	725628	885	1143	13644	932091
CANADIAN POINT	1217064	64596	125022	32517	1232736
TOTAL POINT	1942692	303806	320635	36077	2104827
US TOTAL	896499	9880	27555	72458	1556617
CANADIAN TOTAL	1266004	313286	348190	108535	1376497
BASIN TOTAL	3170490				3940501
SILICA					
LAKE MURON	83457	39617	31412	5274	83457
US MUY POINT	6598	752	3010	7170	82901
CANADIAN MUY POINT	16193	40369	34422	12444	27125
TOTAL MUY POINT	22791	1947	3683	587	110026
US POINT	10027	24	36	425	16444
CANADIAN POINT	5520	1971	3919	1012	6005
TOTAL POINT	15547	41564	35295	5861	22449
US TOTAL	16625	776	3046	7595	99345
CANADIAN TOTAL	21713	42340	38341	13456	33130
BASIN TOTAL	121795				215932

 *
 * YEARLY SUMMARY FOR *
 * 1979 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	1703	2013	2595		1703
US NON POINT	424			552	552
CANADIAN NON POINT	726	57	502	578	1883
TOTAL NON POINT	1170	2070	3097	1130	7467
US POINT	1960	616	1969	234	4779
CANADIAN POINT	212	0	12	60	284
TOTAL POINT	2172	616	1981	294	5063
US TOTAL	2384	2629	4564	786	10363
CANADIAN TOTAL	958	57	514	638	2167
BASIN TOTAL	5005	2686	5078	1424	14233
ORTHO PHOSPHORUS					
LAKE MURON	694	652	340		694
US NON POINT	137			21	1150
CANADIAN NON POINT	330	23	159	168	680
TOTAL NON POINT	467	675	499	189	1830
US POINT	1427	305	957	118	2807
CANADIAN POINT	103	0	0	31	134
TOTAL POINT	1530	305	957	149	2941
US TOTAL	1564	957	1297	139	3957
CANADIAN TOTAL	433	23	159	199	814
BASIN TOTAL	2691	980	1456	338	5465
NITRATE-NITRICE NITROGEN					
LAKE MURON	46103	29048	19359		46103
US NON POINT	2203			2524	53134
CANADIAN NON POINT	10426	2367	5842	7439	30076
TOTAL NON POINT	16631	31415	25201	9963	63210
US POINT	3785	2309	3294	868	10216
CANADIAN POINT	7364	36	48	496	7944
TOTAL POINT	11109	2345	3342	1364	18160
US TOTAL	5988	31357	22653	3392	63350
CANADIAN TOTAL	21792	2403	5890	7935	38020
BASIN TOTAL	73403	33760	28543	11327	147473
AMMONIA NITROGEN					
LAKE MURON	1878	1746	469		1878
US NON POINT	92			193	2500
CANADIAN NON POINT	457	73	358	255	1143
TOTAL NON POINT	549	1819	827	448	3643
US POINT	12284	2968	5682	1000	21914
CANADIAN POINT	1895	48	60	357	2360
TOTAL POINT	14179	3016	5722	1357	24274
US TOTAL	12376	4714	6131	1193	24414
CANADIAN TOTAL	2352	121	478	612	3503
BASIN TOTAL	16006	4835	6549	1805	29795

 * YEARLY SUMMARY FOR *
 * 1979 *
 * BASIN LOADING IN METRIC TONS PER YEAR *

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC NITROGEN					
LAKE MURON	46136	8522	13340	1727	46136
US NON POINT	1000	172	1325	2668	24589
CANADIAN NON POINT	3455	4694	18665	4395	2668
TOTAL NON POINT	4455	931	1845	305	32209
US POINT	5265	12	19	174	8346
CANADIAN POINT	2603	983	1864	479	2808
TOTAL POINT	7868	9453	15105	2032	11154
US TOTAL	6265	184	1544	2842	32935
CANADIAN TOTAL	6058	9637	16529	4874	10428
WASTW TOTAL	59459				89499
CHLORIDE					
LAKE MURON	1064220	284869	301421	25465	1064220
US NON POINT	184524	12641	36120	73351	796279
CANADIAN NON POINT	74090	297510	337541	98016	196202
TOTAL NON POINT	258614	60587	127345	21007	992481
US POINT	728046	968	1226	11949	981025
CANADIAN POINT	1217510	65555	128611	32954	1231651
TOTAL POINT	1945556	349456	428806	46472	2172678
US TOTAL	912570	13649	37346	85300	1737304
CANADIAN TOTAL	1291600	363065	466152	131772	1427855
WASTW TOTAL	3208390				4229379
SILICA					
LAKE MURON	88144	46284	46612	9091	88144
US NON POINT	6988	1125	4051	8563	108935
CANADIAN NON POINT	20155	47369	50663	17654	33894
TOTAL NON POINT	27143	1900	3979	658	142829
US POINT	10011	31	36	377	14636
CANADIAN POINT	5594	2021	4015	1035	6038
TOTAL POINT	15605	48234	50591	9749	22676
US TOTAL	16999	1156	8087	8940	125573
CANADIAN TOTAL	25749	49390	54678	16689	39932
WASTW TOTAL	130912				253669

 * YEARLY SUMMARY FOR *
 * 1980 *
 * BASIN LOADING IN MEGATONS PER YEAR *
 * *****

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	1827	1904	1626	210	1827
US MGN POINT	436	42	370	342	4176
CANADIAN MGN POINT	450	1946	1996	552	5386
TOTAL MGN POINT	882	601	1498	222	4174
US POINT	1853	12	12	72	323
CANADIAN POINT	227	613	1510	294	4497
TOTAL POINT	2080	2505	3124	432	8350
US TOTAL	683	54	382	414	1533
CANADIAN TOTAL	4799	2559	3506	846	11710
ORTHO PHOSPHORUS					
LAKE HURON	730	642	226	15	730
US MGN POINT	108	16	106	105	1031
CANADIAN MGN POINT	339	658	334	120	1451
TOTAL MGN POINT	1452	299	731	108	2590
US POINT	115	0	0	36	151
CANADIAN POINT	1567	299	731	144	2741
TOTAL POINT	1600	941	957	123	3621
US TOTAL	306	16	106	141	571
CANADIAN TOTAL	2636	957	1065	264	4922
NITRATE-NITRIF NITROGEN					
LAKE HURON	48506	28406	13143	1743	48506
US MGN POINT	2240	443	2797	5512	45532
CANADIAN MGN POINT	10195	28809	15400	7255	18947
TOTAL MGN POINT	12435	29252	15643	7807	64479
US POINT	4040	120	3574	990	11016
CANADIAN POINT	7390	120	48	593	8141
TOTAL POINT	11420	2527	3627	1583	19157
US TOTAL	6240	30813	16722	2733	56548
CANADIAN TOTAL	17575	543	2845	6105	27088
BASIN TOTAL	72361	31376	19567	8638	132142
AMMONIA NITROGEN					
LAKE HURON	1970	1833	183	146	1970
US MGN POINT	64	20	205	72	2226
CANADIAN MGN POINT	197	1053	368	218	494
TOTAL MGN POINT	261	3138	6078	1134	2720
US POINT	12758	144	60	378	23108
CANADIAN POINT	1830	3282	6138	1512	2612
TOTAL POINT	14548	4971	6261	1280	25520
US TOTAL	12022	164	245	450	25334
CANADIAN TOTAL	2027	5135	6526	1730	2906
BASIN TOTAL	16019	5135	6526	1730	30210

 * YEARLY SUMMARY FOR *
 * 1980 *
 * BASIN LOADING IN METRIC TONS PER YEAR *
 * *****

	DEI/ST CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
ORGANIC MATERIAL					
LAKE MURUM	48011	8112	7540	981	48011
US MUM POINT	1042	110	1019	1824	17695
CANADIAN MUM POINT	2104	8222	8559	2805	5057
TOTAL MUM POINT	3166	992	1937	384	22752
US POINT	5463	47	12	211	5746
CANADIAN POINT	2605	1039	1989	565	2875
TOTAL POINT	8068	9104	9477	1335	11621
US TOTAL	4525	157	1031	2035	26441
CANADIAN TOTAL	4709	9261	10508	3370	7932
BASIN TOTAL	59285				82384
CHLORIDE					
LAKE MURUM	1074955	318616	197647	18944	1074955
US MUM POINT	221616	2628	19650	59591	756823
CANADIAN MUM POINT	47482	321244	217297	78335	129311
TOTAL MUM POINT	269058	67528	133026	23965	866134
US POINT	743301	2964	1158	14394	967820
CANADIAN POINT	548695	70492	134184	38359	567211
TOTAL POINT	1291926	386144	330673	42909	1535031
US TOTAL	964917	5592	20808	73945	1724643
CANADIAN TOTAL	596137	391736	351461	116894	696522
BASIN TOTAL	2634009				3896120
SILICA					
LAKE MURUM	85413	46506	29233	5694	85413
US MUM POINT	7474	491	3016	7091	86907
CANADIAN MUM POINT	13195	46997	32249	12765	23793
TOTAL MUM POINT	20669	2092	4166	784	112700
US POINT	10421	95	36	450	17423
CANADIAN POINT	5586	2147	4202	1194	6167
TOTAL POINT	16007	48598	33399	6438	23590
US TOTAL	17895	546	3052	7541	106330
CANADIAN TOTAL	18741	49144	36451	13979	29960
BASIN TOTAL	122049				221703

Appendix 2

Monthly Nutrient Loads to Lake Erie

1970-1980

This appendix presents a yearly summary for calculated nutrient loads to Lake Erie for the years 1970-1980. The presented loads are tributary loads only and do not account for shoreline erosion, atmospheric inputs, and sediment inputs. The loads are for total phosphorus as P, nitrite-nitrate nitrogen as N, ammonia nitrogen as N, organic nitrogen as N, chloride as Cl, and silica as SiO and are broken down into components for the Detroit/St. Clair River Basin, the Western Basin, the Central Basin, and the Eastern Basin of Lake Erie. These are divided into point and non point and total point and non point loads.

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JANUARY, 1970
(GIVE DAILY LOADS IN KG/DAY)

	MT/ST. CLP. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	182 (5871)				182 (5871)
LAKE POWELL	48 (1548)	2 (65)	156 (5032)	20 (645)	226 (7290)
PULFUT	566 (18258)	106 (3419)	261 (8419)	54 (1742)	987 (31830)
TOTAL	796 (25677)	108 (3484)	417 (13451)	74 (2387)	1395 (44999)
ORGANIC PHOSPHORUS					
LAKE MURDOCK	82 (2645)				82 (2645)
LAKE POWELL	14 (452)	6 (194)	21 (677)	1 (32)	42 (1355)
PULFUT	264 (9161)	46 (1548)	115 (3710)	26 (839)	473 (15258)
TOTAL	360 (12258)	54 (1742)	136 (4387)	27 (871)	597 (19258)
NITRATE-NITRITIC NITROGEN					
LAKE MURDOCK	2706 (87290)				2706 (87290)
LAKE POWELL	391 (11000)	466 (15032)	1059 (34161)	108 (3484)	1974 (63677)
PULFUT	741 (23903)	180 (5806)	307 (9903)	83 (2677)	1311 (42289)
TOTAL	3708 (122193)	646 (20838)	1366 (44064)	191 (6161)	5991 (193256)
AMMONIA-NITROGEN					
LAKE MURDOCK	402 (12968)				402 (12968)
LAKE POWELL	24 (774)	2 (65)	100 (3226)	12 (387)	138 (4452)
PULFUT	848 (27097)	184 (5935)	397 (12806)	73 (2355)	1494 (48193)
TOTAL	1274 (40839)	186 (6000)	497 (16032)	85 (2742)	2034 (65613)
ORGANIC NITROGEN					
LAKE MURDOCK	3357 (108290)				3357 (108290)
LAKE POWELL	122 (3935)	110 (3548)	383 (12355)	169 (5452)	784 (25290)
PULFUT	261 (8419)	68 (2194)	161 (5194)	31 (1000)	521 (16807)
TOTAL	3740 (120640)	178 (5742)	544 (17549)	200 (6452)	4662 (150387)
CHLORINE					
LAKE MURDOCK	84020 (2710323)				84020 (2710323)
LAKE POWELL	4129 (133194)	9872 (318452)	96732 (3120387)	3194 (103032)	113927 (3675065)
PULFUT	165903 (5351710)	5013 (161710)	10214 (329484)	2189 (70613)	183319 (5913517)
TOTAL	254052 (8195227)	14885 (480162)	106946 (3449671)	5383 (173645)	381266 (12298405)
SILICA					
LAKE MURDOCK	12261 (395516)				12261 (395516)
LAKE POWELL	721 (23254)	1494 (48355)	2497 (93052)	823 (26588)	5440 (191613)
PULFUT	563 (18161)	157 (5005)	307 (9903)	68 (2194)	1095 (35323)
TOTAL	13545 (436935)	1650 (53420)	3204 (103355)	891 (28742)	19296 (622452)

BASED LOADINGS IN METRIC TONS PER FURTH FOR FEBRUARY, 1970 (AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN			CENTRAL BASIN			EASTERN BASIN			TOTAL
TOTAL PHOSPHORUS										
LAKE MURPHY	170 (6551)	204 (8714)	218 (7786)	45 (1607)	178 (6357)					
PO POINT	76 (2714)	131 (4674)	253 (9036)	48 (1714)	543 (20421)					
POINT	513 (18321)	375 (13393)	471 (16822)	93 (3321)	945 (33750)					
TOTAL	767 (27342)				1706 (60428)					
ORTHOPHOSPHORUS										
LAKE MURPHY	80 (2857)	47 (1679)	54 (1214)	5 (179)	80 (2857)					
PO POINT	21 (740)	66 (2357)	112 (4000)	23 (821)	107 (3822)					
POINT	257 (9174)	113 (4036)	146 (5214)	28 (1000)	458 (16357)					
TOTAL	358 (12746)				645 (23036)					
NITRATE-NITRATE NITROGEN										
LAKE MURPHY	2641 (94321)	3033 (10893)	2019 (72107)	235 (8393)	2641 (94321)					
PO POINT	449 (16321)	164 (5857)	277 (9893)	82 (2929)	6936 (247714)					
POINT	671 (23944)	3997 (142750)	2296 (82000)	317 (11322)	1194 (42643)					
TOTAL	4161 (148606)				10771 (384678)					
AMMONIA NITROGEN										
LAKE MURPHY	392 (14000)	93 (3321)	209 (7464)	30 (1071)	392 (14000)					
PO POINT	81 (1464)	215 (7679)	390 (13929)	69 (2464)	373 (13320)					
POINT	760 (27143)	324 (11000)	599 (21393)	99 (3535)	1434 (51215)					
TOTAL	1193 (42607)				2199 (78535)					
ORGANIC NITROGEN										
LAKE MURPHY	3276 (117000)	507 (18107)	574 (20500)	276 (9857)	3276 (117000)					
PO POINT	202 (7214)	62 (2214)	146 (5214)	28 (1000)	1559 (55678)					
POINT	237 (8464)	569 (20321)	720 (25714)	304 (10857)	473 (16892)					
TOTAL	3715 (132678)				5308 (189570)					
CHLORIDE										
LAKE MURPHY	81995 (2928393)	33977 (1213464)	95223 (3400821)	4666 (166643)	81995 (2928393)					
PO POINT	9062 (323643)	4524 (161714)	9225 (329464)	1978 (70643)	142928 (5104571)					
POINT	151320 (5404246)	38505 (1375178)	104448 (3730285)	6648 (237246)	167051 (5966107)					
TOTAL	242377 (8656322)				351974 (12599071)					
SILICA										
LAKE MURPHY	11966 (427357)	7064 (252429)	5018 (179214)	1392 (49714)	11966 (427357)					
PO POINT	1334 (47421)	141 (5036)	277 (9893)	61 (2179)	14417 (529176)					
POINT	509 (18174)	7204 (257465)	5295 (189107)	1453 (51893)	988 (35287)					
TOTAL	13814 (483351)				27771 (991822)					

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH, 1970
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	210 (6774)	375 (12097)	293 (9452)	92 (2968)	210 (6774)
DOWN POINT	225 (7254)	147 (4742)	240 (9032)	54 (1742)	945 (31775)
PULLEY	575 (18548)	522 (16639)	573 (18484)	146 (4710)	1056 (34064)
TOTAL	1010 (32583)				2251 (72613)
URIC ACID PHOSPHORUS					
LAKE HURON	95 (3065)	72 (2323)	45 (1452)	10 (323)	95 (3065)
DOWN POINT	65 (2097)	74 (2387)	124 (4000)	26 (839)	192 (6195)
PULLEY	268 (9290)	146 (4710)	169 (5452)	36 (1162)	512 (16516)
TOTAL	428 (14452)				799 (25776)
NITRATE-NITRITE NITROGEN					
LAKE HURON	3126 (100839)	5240 (169032)	2589 (83516)	675 (21774)	3126 (100839)
DOWN POINT	2663 (85903)	197 (6355)	307 (9903)	91 (2935)	1167 (360225)
PULLEY	743 (23968)	5437 (175367)	2496 (93419)	766 (24704)	1338 (43161)
TOTAL	6532 (210710)				15631 (504225)
AMMONIA NITROGEN					
LAKE HURON	464 (14968)	171 (5516)	243 (7859)	37 (1194)	464 (14968)
DOWN POINT	147 (4742)	251 (8097)	429 (13830)	99 (3194)	598 (19291)
PULLEY	650 (21419)	422 (13613)	672 (21670)	136 (4384)	1629 (52549)
TOTAL	1461 (47129)				2691 (86600)
ORGANIC NITROGEN					
LAKE HURON	3877 (125065)	743 (23968)	743 (23968)	336 (10903)	3877 (125065)
DOWN POINT	671 (21645)	72 (2323)	161 (5194)	31 (1000)	2495 (80884)
PULLEY	262 (8452)	815 (26291)	904 (29162)	369 (11903)	526 (16969)
TOTAL	4810 (155162)				6898 (222510)
CHLORIDE					
LAKE HURON	97058 (3130903)	47583 (1534935)	113082 (3687406)	8661 (279387)	97058 (3130903)
DOWN POINT	38630 (1252591)	5013 (161710)	10214 (329484)	2189 (70613)	208156 (6714709)
PULLEY	170636 (5563367)	52596 (1696645)	123596 (3977290)	10850 (350000)	148052 (4666194)
TOTAL	306524 (9887871)				493266 (15911006)
SILICA					
LAKE HURON	14164 (456903)	9541 (307774)	6001 (193581)	2163 (69774)	14164 (456903)
DOWN POINT	4080 (130968)	157 (5065)	307 (9903)	88 (2194)	21765 (702097)
PULLEY	563 (18161)	9698 (312859)	6308 (203444)	2231 (71948)	1095 (35323)
TOTAL	18787 (608032)				37024 (1194323)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1970
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	199 (6433)	667 (22233)	276 (9200)	294 (9800)	199 (6433)
ADA POINT	453 (15100)	144 (4800)	254 (8433)	51 (1700)	1430 (54333)
POINT	545 (18833)	144 (4800)	535 (17833)	345 (11500)	1019 (33966)
TOTAL	1197 (34566)	911 (27033)	535 (17833)	345 (11500)	2644 (94932)
ORTHOPHOSPHORUS					
LAKE HURON	90 (3000)	133 (4433)	96 (1533)	37 (1233)	90 (3000)
ADA POINT	89 (2967)	71 (2367)	117 (3900)	26 (867)	305 (10166)
POINT	242 (9400)	204 (6800)	163 (5433)	63 (2100)	496 (16534)
TOTAL	401 (15367)	204 (6800)	163 (5433)	63 (2100)	891 (29700)
NITRATE-NITRITE NITROGEN					
LAKE HURON	2950 (94333)	6850 (228333)	2796 (93200)	1619 (53967)	2950 (94333)
ADA POINT	3669 (124967)	191 (6367)	297 (9900)	87 (2900)	15134 (504467)
POINT	720 (24000)	7041 (234700)	3093 (103100)	1706 (56867)	1295 (43167)
TOTAL	7539 (251300)	7041 (234700)	3093 (103100)	1706 (56867)	19379 (645467)
AMMONIA NITROGEN					
LAKE HURON	434 (14400)	367 (12233)	174 (5933)	126 (4200)	434 (14400)
ADA POINT	222 (7400)	243 (8100)	399 (13300)	104 (3467)	893 (29766)
POINT	828 (27600)	610 (20333)	577 (19233)	230 (7667)	1574 (52467)
TOTAL	1488 (49600)	610 (20333)	577 (19233)	230 (7667)	2905 (96833)
ORGANIC NITROGEN					
LAKE HURON	3659 (121967)	1317 (43900)	644 (21467)	842 (28067)	3659 (121967)
ADA POINT	1036 (34533)	71 (2367)	156 (5200)	30 (1000)	3839 (127967)
POINT	254 (8467)	1388 (46267)	800 (26667)	872 (29067)	511 (17034)
TOTAL	4049 (164967)	1388 (46267)	800 (26667)	872 (29067)	8009 (268968)
CHLORINE					
LAKE HURON	91590 (3053000)	61501 (2050033)	106033 (3534433)	22403 (746767)	91590 (3053000)
ADA POINT	54431 (1821033)	4451 (161700)	9884 (329467)	2119 (70633)	244568 (8152266)
POINT	165132 (5504400)	66352 (2211733)	115917 (3863900)	24522 (817400)	181986 (6066200)
TOTAL	311353 (10374433)	66352 (2211733)	115917 (3863900)	24522 (817400)	518144 (17271466)
SILICA					
LAKE HURON	13366 (445533)	12683 (422767)	5904 (19600)	4557 (151900)	13366 (445533)
ADA POINT	5127 (170900)	152 (5067)	297 (9900)	66 (2200)	28271 (942367)
POINT	545 (18167)	12835 (427834)	6201 (206700)	4623 (154100)	1060 (35334)
TOTAL	19038 (634600)	12835 (427834)	6201 (206700)	4623 (154100)	42697 (1423234)

WATER LOADINGS IN PETHIC TONS PER MONTH FOR MAY, 1970 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MUKUNGO	213 (6871)	770 (24839)	93 (3000)	64 (2065)	213 (6871)
LAKE MUKUNGO	90 (2903)	147 (4742)	250 (8065)	54 (1742)	1017 (32807)
LAKE MUKUNGO	573 (18484)	917 (29581)	343 (11065)	116 (3807)	1024 (33033)
TOTAL	876 (28258)				2254 (72711)
ORTHOPHOSPHORUS					
LAKE MUKUNGO	56 (3097)	57 (1839)	13 (419)	10 (323)	96 (3097)
LAKE MUKUNGO	25 (806)	74 (2387)	115 (3710)	26 (839)	105 (3387)
LAKE MUKUNGO	248 (9290)	131 (4220)	128 (4129)	36 (1162)	503 (16226)
TOTAL	409 (13193)				704 (22710)
NITRATE-NITRITE-NITROGEN					
LAKE MUKUNGO	3157 (101839)	5255 (169516)	1555 (50161)	529 (17068)	3157 (101839)
LAKE MUKUNGO	1033 (33323)	194 (6258)	307 (9903)	91 (2935)	4372 (270065)
LAKE MUKUNGO	743 (23966)	5444 (175774)	1862 (60064)	620 (20000)	1335 (43064)
TOTAL	4933 (159130)				12664 (414968)
AMMONIA-NITROGEN					
LAKE MUKUNGO	409 (15129)	24 (774)	45 (1452)	17 (548)	469 (15129)
LAKE MUKUNGO	53 (1710)	237 (7645)	386 (12452)	94 (3032)	139 (4484)
LAKE MUKUNGO	846 (27355)	261 (8419)	431 (13404)	111 (3580)	1565 (50484)
TOTAL	1370 (44198)				2173 (70097)
ORGANIC NITROGEN					
LAKE MUKUNGO	3916 (126323)	493 (15903)	257 (8290)	259 (8355)	3916 (126323)
LAKE MUKUNGO	302 (9742)	72 (2323)	161 (5194)	31 (1000)	1311 (42290)
LAKE MUKUNGO	262 (8452)	565 (18226)	416 (13484)	290 (9355)	526 (16969)
TOTAL	4480 (144517)				5753 (185582)
CHLORIDE					
LAKE MUKUNGO	48023 (5162032)	38018 (1252194)	88828 (2865419)	7334 (236581)	98023 (3162032)
LAKE MUKUNGO	14268 (421542)	5013 (161710)	10214 (329484)	2189 (70613)	154248 (4975742)
LAKE MUKUNGO	170436 (5504387)	43831 (1413904)	99042 (3144903)	9523 (307194)	188052 (6066194)
TOTAL	227927 (4287467)				440325 (14203968)
SILICA					
LAKE MUKUNGO	14305 (461452)	11065 (354935)	3044 (99935)	1568 (50581)	14305 (461452)
LAKE MUKUNGO	1803 (58161)	157 (5065)	307 (9903)	68 (2194)	17534 (565612)
LAKE MUKUNGO	503 (16161)	11222 (362000)	5405 (109030)	1636 (52175)	1095 (35323)
TOTAL	16671 (537774)				32734 (1062387)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JUNE , 1970 (AVE DAILY LOADS IN KG/DAY)

	DEI/SI. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	210 (7000)	73 (2433)	48 (1600)	17 (567)	210 (7000)
LAKE POINT	42 (1400)	139 (4633)	255 (8500)	50 (1667)	190 (6000)
PULLEY	553 (18433)	212 (7066)	303 (10100)	67 (2234)	997 (33233)
TOTAL	805 (26433)				1387 (46233)
ORTHOPHOSPHORUS					
LAKE MURUM	95 (3167)	3 (100)	7 (233)	3 (100)	95 (3167)
LAKE POINT	13 (433)	51 (1700)	115 (3833)	25 (833)	26 (866)
PULLEY	277 (9233)	54 (1800)	122 (4066)	28 (933)	468 (15599)
TOTAL	385 (12833)				589 (19632)
NITRATE-NITRITE NITROGEN					
LAKE MURUM	3115 (103833)	1106 (36867)	1150 (38333)	76 (2533)	3115 (103833)
LAKE POINT	321 (10700)	179 (5967)	297 (9900)	87 (2900)	2653 (88433)
PULLEY	720 (24000)	1285 (42834)	1447 (48233)	163 (5433)	1283 (42767)
TOTAL	4156 (138533)				7051 (235033)
AMMONIA NITROGEN					
LAKE MURUM	463 (15433)	0 (0)	17 (567)	1 (33)	463 (15433)
LAKE POINT	23 (767)	168 (5600)	382 (12733)	73 (2433)	41 (1367)
PULLEY	817 (27233)	168 (5600)	399 (13300)	74 (2466)	1440 (47999)
TOTAL	1303 (43433)				1944 (64799)
ORGANIC NITROGEN					
LAKE MURUM	3864 (128800)	92 (3067)	223 (7433)	144 (4800)	3864 (128800)
LAKE POINT	152 (5067)	67 (2233)	156 (5200)	30 (1000)	611 (20367)
PULLEY	254 (8467)	159 (5300)	379 (12633)	174 (5800)	507 (16900)
TOTAL	4270 (142334)				4982 (166067)
CHLORIDE					
LAKE MURUM	96731 (3224367)	14708 (490267)	69270 (2309000)	3191 (104700)	96731 (3224367)
LAKE POINT	11235 (374500)	4851 (161700)	9884 (329467)	2119 (70633)	98354 (3278467)
PULLEY	165132 (5504400)	19559 (651967)	79154 (2638467)	5280 (175333)	181986 (6066200)
TOTAL	273098 (9103267)				377071 (12569034)
SILICA					
LAKE MURUM	14116 (470533)	2721 (90700)	2389 (79433)	585 (19500)	14116 (470533)
LAKE POINT	260 (8667)	152 (5067)	297 (9900)	86 (2200)	655 (218500)
PULLEY	545 (18167)	2873 (95767)	2686 (89533)	651 (21700)	1060 (35334)
TOTAL	15521 (517367)				21731 (724367)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JULY, 1970
(AVERAGE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	221 (7129)	78 (2516)	12 (387)	22 (710)	221 (7129)
SW. POINT	43 (1347)	140 (4516)	246 (7935)	54 (1742)	155 (5000)
POINT	568 (18323)	218 (7032)	258 (8322)	76 (2452)	1008 (32516)
TOTAL	832 (26839)				1384 (44645)
ORTHOPHOSPHORUS					
LAKE HURON	100 (3226)	5 (161)	4 (129)	4 (129)	100 (3226)
SW. POINT	12 (347)	53 (1710)	105 (3347)	26 (839)	25 (806)
POINT	245 (9194)	58 (1871)	109 (3516)	30 (968)	469 (15130)
TOTAL	347 (12807)				594 (19162)
NITRATE-NITRITE NITROGEN					
LAKE HURON	3201 (105839)	1223 (39452)	535 (17258)	179 (5774)	3281 (105839)
SW. POINT	250 (8065)	182 (5871)	307 (9903)	91 (2935)	2107 (70549)
POINT	743 (23968)	1405 (45323)	892 (27161)	270 (8709)	1323 (42677)
TOTAL	4274 (137872)				6791 (219065)
AMMONIA NITROGEN					
LAKE HURON	447 (15710)	2 (65)	8 (258)	3 (97)	487 (15710)
SW. POINT	20 (645)	168 (5419)	363 (11710)	81 (2613)	33 (1065)
POINT	842 (27161)	170 (5484)	371 (11968)	84 (2710)	1454 (48903)
TOTAL	1349 (43516)				1974 (63678)
ORGANIC NITROGEN					
LAKE HURON	4070 (131290)	91 (2935)	85 (2742)	152 (4903)	4070 (131290)
SW. POINT	124 (4000)	69 (2226)	161 (5194)	31 (1000)	452 (14560)
POINT	262 (8452)	160 (5161)	246 (7936)	183 (5903)	523 (16872)
TOTAL	4456 (143742)				5045 (162742)
CHLORIDE					
LAKE HURON	101886 (3286645)	1452 (466194)	31603 (1019452)	3793 (122355)	101886 (3286645)
SW. POINT	7646 (246605)	5013 (161710)	10214 (329484)	2189 (70613)	57494 (1854646)
POINT	166166 (5360194)	19465 (627904)	41417 (1346936)	5962 (192966)	183562 (5922001)
TOTAL	275698 (8653454)				342462 (11063292)
SILICA					
LAKE HURON	14849 (479645)	2830 (91290)	1115 (35968)	771 (24871)	14849 (479645)
SW. POINT	642 (22000)	157 (5005)	307 (9903)	68 (2194)	5398 (174129)
POINT	543 (18161)	2987 (96355)	1422 (45871)	834 (27065)	1095 (35423)
TOTAL	16114 (514406)				21362 (689077)

WASIN LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1970
(AVE DAILY LOADS IN KG/DAY)

	DE/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	223 (7190)	1 (32)	4 (129)	33 (1065)	223 (7190)
POA POINT	51 (1600)	121 (3903)	230 (7419)	53 (1710)	69 (2226)
TOTAL	505 (16226)	122 (3935)	234 (7548)	86 (2775)	969 (31258)
ORTHOPHOSPHORUS					
LAKE MURDOCK	101 (3254)	3 (97)	3 (97)	0 (129)	101 (3258)
POA POINT	7 (226)	39 (1258)	101 (3258)	26 (834)	17 (549)
TOTAL	203 (9129)	42 (1355)	104 (3355)	30 (968)	449 (14884)
NITRATE-NITRITE-NITROGEN					
LAKE MURDOCK	3312 (106839)	277 (8935)	226 (7290)	102 (3290)	3312 (106839)
POA POINT	87 (2806)	176 (5677)	303 (9774)	91 (2935)	692 (22321)
TOTAL	4136 (133419)	453 (14612)	529 (17064)	193 (6225)	5311 (171320)
AMMONIA-NITROGEN					
LAKE MURDOCK	492 (15871)	1 (32)	6 (194)	7 (226)	492 (15871)
POA POINT	16 (516)	135 (4355)	343 (11065)	76 (2452)	30 (968)
TOTAL	836 (26987)	136 (4387)	349 (11259)	83 (2678)	1390 (44840)
ORGANIC-NITROGEN					
LAKE MURDOCK	4109 (132548)	23 (742)	34 (1226)	146 (4710)	4109 (132548)
POA POINT	75 (2419)	64 (2065)	152 (4903)	31 (1000)	282 (9047)
TOTAL	4440 (143350)	87 (2807)	190 (6129)	177 (5710)	507 (16355)
CHLORIDE					
LAKE MURDOCK	102852 (3317806)	5360 (172903)	21540 (694839)	2978 (94065)	102852 (3317806)
POA POINT	2673 (86226)	4979 (160613)	10152 (327484)	2189 (70613)	32551 (1050033)
TOTAL	165532 (5339742)	10339 (333516)	31692 (1022323)	5167 (166678)	182452 (5898452)
SILICA					
LAKE MURDOCK	15009 (484161)	910 (29355)	539 (17387)	706 (22774)	15009 (484161)
POA POINT	423 (13695)	157 (5065)	307 (9403)	68 (2194)	2578 (83161)
TOTAL	563 (18161)	1067 (34420)	846 (27290)	774 (24968)	1095 (35323)
	15995 (515967)				18682 (602645)

HASIN: LOADINGS IN PLETRIC TONS PER MONTH FOR SEPTEMBER, 1970
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR HASIN	WESTERN BASIN	CENTRAL HASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURKIN	215 (7167)				215 (7167)
LAKE EULET	29 (967)	1 (33)	18 (600)	38 (1267)	86 (2867)
POLE	546 (18267)	70 (2333)	226 (7533)	51 (1700)	895 (29833)
TOTAL	792 (26401)	71 (2366)	244 (8133)	89 (2967)	1196 (39867)
ORTHOPHOSPHORUS					
LAKE MURKIN	97 (3233)				97 (3233)
LAKE EULET	7 (233)	2 (67)	3 (100)	4 (133)	16 (533)
POLE	275 (9167)	34 (1133)	100 (3333)	25 (833)	434 (14466)
TOTAL	379 (12633)	36 (1200)	103 (3433)	29 (966)	547 (18232)
NITRATE-NITRITE-NITROGEN					
LAKE MURKIN	3190 (106333)				3190 (106333)
LAKE EULET	92 (3067)	89 (2967)	236 (7467)	251 (8367)	648 (22266)
POLE	714 (23467)	164 (5467)	291 (9700)	87 (2900)	1261 (42034)
TOTAL	4001 (133567)	253 (8434)	527 (17567)	338 (11267)	5119 (170633)
AMMONIA NITROGEN					
LAKE MURKIN	474 (15800)				474 (15800)
LAKE EULET	15 (500)	1 (33)	34 (1133)	22 (733)	72 (2399)
POLE	410 (27000)	124 (4133)	343 (11433)	77 (2567)	1354 (45133)
TOTAL	1294 (43300)	125 (4166)	377 (12566)	99 (3300)	1900 (63332)
ORGANIC NITROGEN					
LAKE MURKIN	3958 (131933)				3958 (131933)
LAKE EULET	77 (2567)	9 (300)	77 (2567)	204 (6967)	372 (12401)
POLE	254 (8467)	54 (1800)	155 (5167)	30 (1000)	493 (16434)
TOTAL	4289 (142467)	63 (2100)	232 (7734)	239 (7967)	4823 (160766)
COLESTEROL					
LAKE MURKIN	99067 (3302233)				99067 (3302233)
LAKE EULET	3616 (120533)	3778 (125933)	43163 (1438767)	4267 (142233)	54824 (1827466)
POLE	160741 (5359367)	4818 (160600)	4854 (328633)	2119 (70633)	177577 (5919233)
TOTAL	263424 (8722133)	8596 (286533)	53022 (1767400)	6386 (212866)	331468 (11048432)
SILICA					
LAKE MURKIN	14457 (481900)				14457 (481900)
LAKE EULET	452 (15067)	387 (12400)	775 (25833)	1084 (36133)	2698 (89933)
POLE	545 (18167)	150 (5000)	297 (9900)	66 (2200)	1058 (35267)
TOTAL	15454 (515130)	537 (17900)	1072 (35733)	1150 (38333)	18213 (607100)

MASIN LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1970 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLK. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO GULF POINT	210 (7065)	2 (65)	49 (1581)	43 (1387)	219 (7065)
POINT	37 (1190)	86 (2774)	249 (8032)	54 (1742)	131 (4227)
TOTAL	567 (18291)	88 (2839)	298 (9613)	97 (3129)	956 (30830)
	423 (26545)				1306 (42130)
ORTHOPHOSPHORUS					
LAKE MURDO GULF POINT	99 (3194)	3 (97)	6 (194)	4 (129)	99 (3194)
POINT	12 (367)	39 (1258)	110 (3548)	26 (834)	25 (807)
TOTAL	248 (9161)	42 (1355)	116 (3742)	30 (968)	459 (14806)
	395 (12742)				543 (18007)
NITRATE-NITRITE-NITROGEN					
LAKE MURDO GULF POINT	3250 (104839)	320 (10323)	449 (14484)	309 (9968)	3250 (104839)
POINT	180 (5466)	177 (5710)	307 (9903)	91 (2935)	1258 (40581)
TOTAL	743 (23968)	497 (16033)	756 (24387)	400 (12903)	1318 (42516)
	4173 (134613)				5826 (187936)
AMMONIA-NITROGEN					
LAKE MURDO GULF POINT	443 (15581)	4 (129)	85 (2677)	17 (548)	443 (15581)
POINT	14 (581)	148 (4774)	377 (12161)	81 (2613)	122 (3935)
TOTAL	841 (27129)	152 (4903)	460 (14838)	98 (3161)	1447 (46677)
	1342 (43291)				2052 (66193)
ORGANIC NITROGEN					
LAKE MURDO GULF POINT	4032 (130065)	29 (935)	199 (6097)	222 (7161)	4032 (130065)
POINT	109 (3516)	67 (2161)	161 (5194)	31 (1000)	549 (17709)
TOTAL	262 (8452)	96 (3096)	350 (11291)	253 (8161)	521 (16807)
	4403 (142033)				5102 (164581)
CHLORIDE					
LAKE MURDO GULF POINT	100921 (3255516)	9663 (311710)	69589 (2248806)	5088 (164129)	100921 (3255516)
POINT	5819 (187710)	4976 (160516)	10214 (329484)	2189 (70613)	90159 (290335)
TOTAL	166085 (5357581)	14639 (472226)	79803 (2574290)	7277 (234742)	183464 (5918194)
	272825 (8808807)				374544 (12082065)
SILICA					
LAKE MURDO GULF POINT	14727 (475065)	939 (30290)	1570 (50645)	1290 (41613)	14727 (475065)
POINT	603 (19452)	156 (5032)	307 (9903)	68 (2194)	4402 (142000)
TOTAL	563 (18161)	1095 (35322)	1877 (60548)	1358 (43807)	1094 (35290)
	15893 (512678)				20223 (652355)

WASIN LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1970 (AVE DAILY LOADS IN KG/DAY)

	PET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	212 (7067)	14 (600)	142 (4733)	109 (3633)	212 (7067)
GOV. POINT	87 (2900)	135 (4500)	258 (8600)	51 (1700)	356 (11666)
TOTAL	550 (18333)	153 (5100)	400 (13333)	160 (5333)	994 (33133)
ORTHOPHOSPHORUS					
LAKE MURDOCK	95 (3167)	6 (200)	22 (733)	14 (467)	95 (3167)
GOV. POINT	27 (9233)	46 (1533)	112 (3733)	26 (867)	64 (2133)
TOTAL	394 (13133)	52 (1733)	134 (4466)	40 (1334)	461 (15366)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	3145 (104833)	959 (31967)	1186 (39533)	742 (24733)	3145 (104833)
GOV. POINT	927 (30900)	184 (6133)	297 (9900)	87 (2900)	3814 (127133)
TOTAL	4792 (159733)	1143 (38100)	1483 (49433)	829 (27633)	8247 (274699)
AMMONIA NITROGEN					
LAKE MURDOCK	467 (15567)	17 (567)	215 (7167)	63 (2100)	467 (15567)
GOV. POINT	41 (1367)	159 (5300)	394 (13133)	98 (3267)	336 (11201)
TOTAL	817 (27233)	176 (5867)	609 (20300)	161 (5367)	1468 (48933)
ORGANIC NITROGEN					
LAKE MURDOCK	3902 (130067)	82 (2733)	460 (15333)	546 (18200)	3902 (130067)
GOV. POINT	258 (8600)	67 (2233)	156 (5200)	30 (1000)	1346 (44866)
TOTAL	4414 (147134)	149 (4966)	616 (20533)	576 (19200)	5755 (191833)
CHLORIDE					
LAKE MURDOCK	97665 (3255500)	15400 (513333)	100774 (3359133)	9174 (305800)	97665 (3255500)
GOV. POINT	15978 (52600)	4851 (161700)	9884 (329467)	2119 (70633)	140426 (4680866)
TOTAL	162439 (5414333)	20251 (675033)	110658 (3644600)	11293 (376433)	179284 (5976133)
SILICA					
LAKE MURDOCK	14252 (475067)	2026 (67533)	3143 (104767)	2300 (76667)	14252 (475067)
GOV. POINT	1573 (52433)	152 (5067)	297 (9900)	66 (2200)	9042 (301400)
TOTAL	504 (16167)	2178 (72600)	3440 (114667)	2366 (78867)	1060 (35334)
	16370 (545667)				24354 (811801)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR DECEMBER, 1970
(AVE DAILY LOADS IN KG/DAY)

	DE/ST. CLP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	229 (7097)	185 (5968)	145 (4677)	127 (4097)	220 (7097)
DOWN POINT	172 (5504)	145 (4677)	280 (9032)	54 (1742)	629 (20290)
POINT	570 (18547)	330 (10645)	425 (15709)	181 (5839)	1049 (33838)
TOTAL	962 (31032)				1898 (61225)
ORTHOPHOSPHORUS					
LAKE MURPHY	99 (3194)	10 (323)	27 (871)	21 (677)	99 (3194)
DOWN POINT	43 (1387)	70 (2254)	125 (4032)	27 (871)	101 (3258)
POINT	224 (9226)	40 (2581)	152 (4903)	48 (1548)	508 (16387)
TOTAL	428 (13807)				708 (22839)
NITRATE-NITRIFER					
LAKE MURPHY	3266 (105355)	2594 (83806)	1475 (60484)	1059 (34161)	3266 (105355)
DOWN POINT	1943 (62677)	189 (6097)	307 (9903)	91 (2935)	7475 (241128)
POINT	743 (23964)	2787 (89903)	2192 (70387)	1150 (37096)	1330 (42903)
TOTAL	5952 (192001)				12071 (389386)
AMMONIA NITROGEN					
LAKE MURPHY	485 (15645)	21 (677)	175 (5645)	66 (2129)	485 (15645)
DOWN POINT	95 (3045)	195 (6290)	419 (13516)	108 (3484)	357 (11516)
POINT	844 (27226)	216 (6967)	594 (19161)	174 (5613)	1566 (50516)
TOTAL	1424 (45936)				2408 (77677)
ORGANIC NITROGEN					
LAKE MURPHY	4051 (130677)	191 (6161)	516 (16645)	434 (14000)	4051 (130677)
DOWN POINT	451 (14544)	71 (2290)	161 (5194)	31 (1000)	1592 (51354)
POINT	262 (8452)	262 (8451)	677 (21839)	465 (15000)	525 (16936)
TOTAL	4764 (153677)				6168 (198967)
CHLORIDE					
LAKE MURPHY	101403 (3271065)	25366 (818258)	111639 (3601258)	12784 (412387)	101403 (3271065)
DOWN POINT	22094 (712711)	5013 (161710)	10214 (329484)	2189 (70613)	171843 (5544613)
POINT	166354 (5366419)	30379 (979968)	121853 (3930742)	14973 (483000)	183775 (5928226)
TOTAL	289856 (9350194)				457061 (14743904)
SILICA					
LAKE MURPHY	14798 (477355)	5343 (172355)	4276 (137935)	2787 (89903)	14798 (477355)
DOWN POINT	2807 (90548)	157 (5065)	307 (9903)	68 (2194)	15213 (490741)
POINT	563 (18161)	5500 (177420)	4583 (147838)	2855 (92097)	1095 (35323)
TOTAL	18168 (586064)				31106 (1003419)

MAST- LOADINGS IN METRIC TONS PER MONTH FOR JANUARY, 1971
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	224 (7355)				224 (7355)
NO. POINT	76 (2052)	1 (32)	38 (1226)	38 (1226)	153 (4936)
POINT	563 (18161)	79 (2548)	235 (7581)	45 (1452)	922 (29742)
TOTAL	867 (27968)	80 (2580)	273 (8807)	83 (2678)	1303 (42033)
ORTHO PHOSPHORUS					
LAKE MURON	81 (2613)				81 (2613)
NO. POINT	19 (613)	5 (161)	10 (323)	9 (290)	43 (1387)
POINT	282 (9197)	39 (1258)	103 (3323)	22 (710)	446 (14366)
TOTAL	382 (12323)	44 (1419)	113 (3646)	31 (1000)	570 (18388)
NITRATE-NITRITE NITROGEN					
LAKE MURON	3072 (99097)				3072 (99097)
NO. POINT	667 (21516)	247 (7968)	511 (16484)	367 (11839)	1792 (57807)
POINT	739 (24839)	174 (5613)	317 (10226)	88 (2839)	1318 (42517)
TOTAL	4478 (144852)	421 (13581)	828 (26710)	455 (14678)	6182 (199421)
AMMONIA NITROGEN					
LAKE MURON	345 (11129)				345 (11129)
NO. POINT	34 (1097)	2 (65)	66 (2129)	23 (742)	125 (4033)
POINT	837 (27600)	162 (5226)	317 (10226)	82 (2645)	1398 (45097)
TOTAL	1216 (39226)	164 (5291)	383 (12355)	105 (3387)	1868 (60259)
ORGANIC NITROGEN					
LAKE MURON	3728 (120258)				3728 (120258)
NO. POINT	190 (6120)	39 (1258)	199 (6419)	264 (8516)	692 (22322)
POINT	261 (8419)	65 (2097)	123 (3968)	30 (968)	479 (15452)
TOTAL	4179 (134406)	104 (3355)	322 (10387)	294 (9484)	4899 (158032)
CHLORINE					
LAKE MURON	8569 (2763516)				8569 (2763516)
NO. POINT	1044 (336194)	9099 (293516)	71817 (2316677)	5356 (172774)	96756 (3121161)
POINT	15924 (5352387)	4858 (156710)	9824 (316903)	2118 (68323)	182724 (5894323)
TOTAL	26277 (8455097)	13957 (450226)	81641 (2633580)	7474 (241097)	365149 (11779000)
SILICA					
LAKE MURON	14587 (470588)				14587 (470588)
NO. POINT	1130 (36452)	1190 (38347)	1622 (52323)	1202 (38774)	5144 (165936)
POINT	561 (18097)	152 (4903)	296 (9548)	66 (2129)	1075 (34677)
TOTAL	16278 (525597)	1342 (43290)	1918 (61871)	1268 (40903)	20806 (671161)

WASIN LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1971 (AVE DAILY LOADS IN KG/DAY)

	DE/ST. CLP WASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	201 (7179)	741 (26364)	698 (24929)	93 (3321)	201 (7179)
PON POINT	229 (8174)	131 (4679)	239 (8536)	41 (1464)	1761 (62093)
POINT	528 (18714)	872 (31143)	937 (33465)	134 (4785)	935 (33393)
TOTAL	958 (34072)				2897 (103465)
ORTHOPHOSPHORUS					
LAKE MURON	72 (2571)	121 (4321)	92 (3286)	9 (321)	72 (2571)
PON POINT	63 (2250)	64 (2286)	105 (3750)	20 (714)	285 (10178)
POINT	360 (9286)	185 (6607)	197 (7036)	29 (1035)	849 (16036)
TOTAL	595 (14107)				896 (28785)
NITRATE-NITRIF NITROGEN					
LAKE MURON	2708 (96714)	5903 (210821)	3702 (132214)	530 (18929)	2708 (96714)
PON POINT	2769 (98893)	172 (6143)	287 (10250)	79 (2821)	12904 (460857)
POINT	669 (23893)	6075 (216964)	3989 (142464)	609 (21750)	1207 (43107)
TOTAL	6146 (219500)				16819 (600678)
AMMONIA NITROGEN					
LAKE MURON	304 (10857)	237 (8464)	485 (17321)	36 (1286)	304 (10857)
PON POINT	159 (5679)	226 (7857)	361 (12893)	80 (2857)	917 (32750)
POINT	764 (27429)	457 (16321)	846 (30214)	116 (4143)	1429 (51036)
TOTAL	1231 (43965)				2650 (94643)
ORGANIC NITROGEN					
LAKE MURON	3286 (117357)	1086 (38786)	1222 (43643)	344 (12286)	3286 (117357)
PON POINT	843 (30107)	64 (2286)	111 (3964)	27 (984)	3495 (124822)
POINT	236 (8429)	1150 (41072)	1333 (47607)	371 (13250)	438 (15643)
TOTAL	4365 (155893)				7219 (257822)
CHLORIDE					
LAKE MURON	75510 (2696786)	63171 (2256107)	94214 (3364786)	6460 (230714)	75510 (2696786)
PON POINT	55492 (1980971)	4388 (156714)	8873 (316893)	1914 (68357)	219287 (7831678)
POINT	154048 (5501714)	67559 (2412821)	103087 (3681679)	8378 (299071)	169223 (6043678)
TOTAL	285000 (10178571)				464020 (16572142)
SILICA					
LAKE MURON	12857 (459179)	10409 (371750)	10194 (364071)	1704 (60537)	12857 (459179)
PON POINT	4283 (152940)	137 (4893)	267 (9536)	59 (2107)	26590 (949642)
POINT	507 (18107)	10546 (376643)	10461 (373607)	1763 (62964)	970 (34643)
TOTAL	17647 (630250)				40417 (1443464)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH , 1971
(AVE DAILY LOADS IN KG/DAY)

	DEL/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	227 (7323)	209 (9323)	255 (8226)	168 (5419)	227 (7323)
NOA POINT	1732 (55871)	145 (4677)	264 (8516)	45 (1452)	2444 (78839)
POINT	581 (18742)	434 (14000)	519 (16742)	213 (6871)	1035 (33387)
TOTAL	2540 (81936)				3706 (119549)
ORTHO PHOSPHORUS					
LAKE MURDOCK	81 (2613)	69 (2226)	51 (1645)	23 (742)	81 (2613)
NOA POINT	91 (2935)	71 (2290)	125 (4032)	23 (742)	234 (7548)
POINT	240 (9355)	140 (4516)	176 (5677)	46 (1484)	509 (16419)
TOTAL	462 (14903)				824 (26580)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	3057 (98613)	4970 (160323)	2633 (84935)	1179 (38032)	3057 (98613)
NOA POINT	3773 (121710)	191 (6161)	317 (10226)	88 (2839)	12555 (405000)
POINT	740 (23871)	5161 (166484)	2950 (95161)	1267 (40871)	1336 (43097)
TOTAL	7570 (244194)				16948 (546710)
AMMONIA NITROGEN					
LAKE MURDOCK	343 (11065)	210 (6774)	275 (8871)	70 (2258)	343 (11065)
NOA POINT	247 (7968)	242 (7806)	377 (12161)	104 (3355)	802 (25871)
POINT	855 (27581)	452 (14580)	652 (21032)	174 (5613)	1578 (50903)
TOTAL	1445 (46614)				2723 (87839)
ORGANIC NITROGEN					
LAKE MURDOCK	3710 (119677)	794 (25613)	834 (26903)	473 (15258)	3710 (119677)
NOA POINT	1218 (39290)	71 (2290)	123 (3968)	30 (968)	3319 (107064)
POINT	261 (8419)	865 (27903)	957 (30871)	503 (16226)	485 (15645)
TOTAL	5149 (167386)				7514 (242386)
CHLORINE					
LAKE MURDOCK	85255 (2750161)	50577 (1631516)	131904 (4254468)	13613 (439129)	85255 (2750161)
NOA POINT	55091 (1777129)	4858 (156710)	9824 (316903)	2118 (68323)	251185 (8102742)
POINT	170553 (5501710)	55435 (1788226)	141728 (4571871)	15731 (507452)	187353 (6043646)
TOTAL	310899 (10029000)				523793 (16896549)
SILICA					
LAKE MURDOCK	14516 (468258)	9503 (306548)	6319 (203639)	3234 (104323)	14516 (468258)
NOA POINT	5754 (185742)	152 (4903)	296 (9548)	66 (2129)	24814 (800452)
POINT	581 (18697)	9655 (311451)	6615 (213387)	3300 (106452)	1075 (34677)
TOTAL	20855 (672097)				40405 (1303387)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1971
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	223 (7433)	13 (433)	43 (1433)	417 (13900)	223 (7433)
POINTE	269 (8967)	90 (3000)	222 (7400)	43 (1433)	742 (24733)
TOTAL	1002 (34733)	103 (3433)	265 (8833)	460 (15333)	1870 (62332)
ORTHOPHOSPHORUS					
LAKE MURDOCK	79 (2633)	7 (233)	10 (333)	48 (1600)	79 (2633)
POINTE	54 (1800)	47 (1567)	96 (3200)	22 (733)	119 (3966)
TOTAL	277 (9233)	54 (1800)	106 (3533)	70 (2333)	442 (14733)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	3002 (100067)	869 (28967)	660 (22000)	1455 (61833)	3002 (100067)
POINTE	2500 (83333)	180 (6000)	307 (10233)	84 (2800)	5884 (196133)
TOTAL	716 (23867)	1049 (34967)	967 (32233)	1939 (64633)	1287 (42900)
AMMONIA NITROGEN					
LAKE MURDOCK	6218 (207267)				10173 (339100)
POINTE	337 (11233)				337 (11233)
TOTAL	120 (4000)	23 (767)	67 (2233)	189 (4967)	359 (11967)
ORGANIC NITROGEN					
LAKE MURDOCK	1273 (42433)	200 (6667)	308 (10267)	100 (3333)	1424 (47467)
POINTE	3643 (121433)	89 (2967)	196 (6533)	894 (29800)	3643 (121433)
TOTAL	592 (19733)	67 (2233)	119 (3967)	29 (967)	1771 (59033)
CHLORIDE					
LAKE MURDOCK	253 (8433)	154 (5200)	315 (10500)	923 (30767)	468 (15600)
POINTE	4488 (149599)				5882 (196066)
TOTAL	3643 (121433)	89 (2967)	196 (6533)	894 (29800)	3643 (121433)
SILICA					
LAKE MURDOCK	83707 (2790233)	17259 (575300)	87601 (2920033)	20744 (691467)	83707 (2790233)
POINTE	25117 (837233)	4701 (156700)	9507 (316900)	2050 (68333)	150721 (5024033)
TOTAL	163099 (5436633)	21960 (732000)	97108 (3236933)	22794 (759800)	179357 (5978566)
SILICA					
LAKE MURDOCK	271923 (9064099)				413785 (13792832)
POINTE	14252 (475067)	2154 (71800)	1581 (52700)	5325 (177500)	14252 (475067)
TOTAL	3459 (115300)	147 (4900)	286 (9533)	64 (2133)	12519 (417300)
SILICA					
LAKE MURDOCK	542 (18467)	2301 (76700)	1667 (62233)	5389 (179633)	1039 (34633)
TOTAL	16253 (608434)				27810 (927000)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MAY , 1971
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	237 (7645)	318 (10250)	78 (2516)	36 (1161)	237 (7645)
NO. POINT	48 (1508)	140 (4516)	238 (7677)	45 (1452)	480 (15083)
POINT	503 (16161)	458 (14774)	316 (10193)	81 (2613)	986 (31806)
TOTAL	848 (27354)				1703 (54934)
ORTHOPHOSPHORUS					
LAKE MURON	65 (2742)	22 (710)	14 (452)	7 (226)	85 (2742)
NO. POINT	14 (452)	70 (2258)	106 (3419)	22 (710)	57 (1840)
POINT	282 (9097)	92 (2968)	120 (3871)	29 (936)	480 (15484)
TOTAL	341 (12291)				622 (20066)
NITRATE-NITRITE-NITROGEN					
LAKE MURON	3205 (103387)	3874 (124968)	1703 (54935)	309 (9968)	3205 (103387)
NO. POINT	302 (9782)	173 (5511)	317 (10226)	88 (2839)	6188 (199613)
POINT	737 (23774)	4047 (130549)	2020 (65161)	397 (12807)	1315 (42420)
TOTAL	4244 (136903)				10708 (345420)
AMMONIA-NITROGEN					
LAKE MURON	360 (11613)	2 (65)	35 (1129)	14 (452)	360 (11613)
NO. POINT	22 (710)	174 (5613)	331 (10677)	81 (2613)	73 (2356)
POINT	836 (26968)	176 (5678)	366 (11806)	95 (3065)	1422 (45871)
TOTAL	1218 (39291)				1855 (59840)
ORGANIC NITROGEN					
LAKE MURON	3891 (125516)	388 (12516)	249 (8032)	253 (8161)	3891 (125516)
NO. POINT	153 (4290)	66 (2129)	123 (3968)	30 (968)	1023 (32999)
POINT	260 (8387)	454 (14685)	372 (12000)	283 (9129)	479 (15452)
TOTAL	4284 (138193)				5393 (173967)
CHLORIDE					
LAKE MURON	89394 (2883677)	25486 (822129)	76908 (2482194)	5114 (164988)	89394 (2883677)
NO. POINT	10117 (326355)	4858 (156710)	9824 (316903)	2118 (68323)	117665 (3795646)
POINT	165806 (5348581)	30344 (978839)	66772 (2799097)	7232 (233291)	182606 (5800517)
TOTAL	265317 (8558613)				389665 (12569840)
SILICA					
LAKE MURON	15221 (491000)	7455 (240484)	2885 (93065)	1140 (36774)	15221 (491000)
NO. POINT	694 (22387)	152 (4903)	296 (9548)	66 (2129)	12174 (392710)
POINT	541 (18097)	1607 (245387)	3181 (102613)	1206 (38903)	1075 (34677)
TOTAL	16476 (531484)				28470 (918387)

WASTE LOADINGS TO METRIC TONS PER MONTH FOR JUNE, 1971 (AVE DAILY LOADS IN KG/DAY)

	WEST COAST BASIN	ESTUARY BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HOBBS	232 (7733)	104 (3600)	17 (567)	25 (833)	232 (7733)
LAKE HOBBS	30 (1134)	130 (4167)	214 (7133)	43 (1433)	184 (6133)
LAKE HOBBS	502 (18667)	242 (8667)	231 (7700)	68 (2266)	933 (31100)
TOTAL	564 (26533)				1349 (44966)
DIAPYCNOMONAS					
LAKE HOBBS	83 (2767)	3 (100)	2 (67)	5 (167)	83 (2767)
LAKE HOBBS	9 (300)	54 (1967)	94 (3133)	21 (700)	19 (634)
LAKE HOBBS	272 (9467)	62 (2067)	96 (3200)	26 (867)	446 (14867)
TOTAL	364 (12134)				504 (18266)
CHLOROPHYLL A					
LAKE HOBBS	3131 (10367)	2062 (68733)	434 (14400)	106 (6200)	3131 (10367)
LAKE HOBBS	126 (4200)	164 (5467)	307 (10233)	84 (2800)	2412 (93733)
LAKE HOBBS	705 (23500)	2726 (74200)	745 (24833)	270 (9000)	1260 (42000)
TOTAL	3962 (132067)				7203 (240100)
AMMONIA NITROGEN					
LAKE HOBBS	352 (11733)	11 (367)	14 (467)	2 (67)	352 (11733)
LAKE HOBBS	16 (533)	145 (4833)	290 (9667)	74 (2467)	32 (1067)
LAKE HOBBS	407 (26900)	145 (4833)	304 (10134)	76 (2534)	1316 (43867)
TOTAL	1175 (39166)				1700 (56667)
ORGANIC NITROGEN					
LAKE HOBBS	3400 (126667)	156 (5200)	85 (2133)	156 (5267)	3400 (126667)
LAKE HOBBS	48 (15933)	62 (2067)	119 (3967)	29 (967)	487 (16233)
LAKE HOBBS	203 (8300)	214 (7267)	204 (6400)	147 (6234)	459 (15301)
TOTAL	4151 (137900)				4746 (154201)
CHLOROPHYLL					
LAKE HOBBS	87311 (2910367)	14843 (494767)	35255 (1175167)	3866 (124867)	87311 (2910367)
LAKE HOBBS	3052 (101734)	1701 (56700)	9507 (316900)	2050 (68333)	57016 (190534)
LAKE HOBBS	160501 (535033)	19544 (651467)	44762 (1492067)	5916 (197200)	176759 (5891966)
TOTAL	250664 (8362133)				321046 (10702467)
SILICA					
LAKE HOBBS	14806 (495533)	4244 (141500)	1136 (37867)	781 (26033)	14806 (495533)
LAKE HOBBS	437 (14467)	107 (3500)	246 (8000)	64 (2133)	459 (15301)
LAKE HOBBS	502 (18667)	4342 (146400)	1422 (47400)	845 (28166)	1039 (34633)
TOTAL	15845 (524167)				22504 (750133)

BASELINE LOADINGS TO PLUTONIC ZONES PER HOUR PER HOUR (AVE DAILY LOADS IN KG/HOUR) JULY 1, 1971

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PLUTONICS				
LAKE MICHIGAN	246 (7935)			246 (7935)
LAKE SUPERIOR	27 (871)			27 (871)
LAKE HURON	41 (12097)	3 (97)	17 (548)	60 (17682)
LAKE ERIE	43 (12097)	209 (6742)	42 (1355)	294 (8655)
LAKE ONTARIO	43 (12097)	212 (6839)	54 (1603)	299 (8939)
UNTO PLUTONICS				
LAKE MICHIGAN	48 (2639)			48 (2639)
LAKE SUPERIOR	4 (120)			4 (120)
LAKE HURON	24 (1194)	3 (97)	5 (161)	32 (1052)
LAKE ERIE	37 (12097)	92 (2468)	21 (677)	150 (4744)
LAKE ONTARIO	37 (12097)	95 (3065)	26 (838)	158 (4900)
NITRATE PLUTONICS				
LAKE MICHIGAN	3524 (107226)			3524 (107226)
LAKE SUPERIOR	13 (2632)			13 (2632)
LAKE HURON	726 (23415)	340 (4685)	112 (3613)	1178 (37113)
LAKE ERIE	4113 (12097)	317 (10226)	88 (2839)	4518 (13419)
LAKE ONTARIO	4113 (12097)	461 (14871)	206 (6452)	4780 (14224)
APPHENIA PLUTONICS				
LAKE MICHIGAN	373 (12032)			373 (12032)
LAKE SUPERIOR	13 (2632)			13 (2632)
LAKE HURON	121 (3983)	5 (161)	1 (32)	127 (4176)
LAKE ERIE	123 (3983)	267 (9258)	73 (2355)	423 (13676)
LAKE ONTARIO	123 (3983)	292 (9419)	74 (2387)	489 (15789)
ORGANIC PLUTONICS				
LAKE MICHIGAN	4035 (130161)			4035 (130161)
LAKE SUPERIOR	69 (2065)			69 (2065)
LAKE HURON	256 (8252)	26 (439)	112 (3613)	434 (13124)
LAKE ERIE	4355 (140664)	117 (3740)	30 (968)	4502 (145642)
LAKE ONTARIO	4355 (140664)	143 (4413)	142 (4581)	4640 (145647)
CHLORINE				
LAKE MICHIGAN	92705 (2990484)			92705 (2990484)
LAKE SUPERIOR	1176 (37435)			1176 (37435)
LAKE HURON	125427 (4352485)	13102 (422495)	2794 (90129)	139364 (4777108)
LAKE ERIE	259418 (839993)	9819 (316742)	2118 (68323)	261955 (849947)
LAKE ONTARIO	259418 (839993)	22921 (739387)	4912 (154452)	287241 (933834)
SILICA				
LAKE MICHIGAN	15785 (509194)			15785 (509194)
LAKE SUPERIOR	470 (14935)			470 (14935)
LAKE HURON	561 (1807)	432 (13435)	527 (17000)	1120 (35472)
LAKE ERIE	14716 (539226)	296 (9508)	66 (2129)	15078 (500363)
LAKE ONTARIO	14716 (539226)	728 (23473)	593 (19129)	16037 (511828)

WASTE LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1971
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL DISCHARGES				
LAKE SUPERIOR	246 (7045)			246 (7935)
LAKE MICHIGAN	20 (435)			20 (435)
LAKE HURON	541 (10047)			541 (10047)
LAKE ERIE	436 (26527)	2 (65)	19 (613)	457 (27145)
TOTAL	1243 (28215)	203 (6540)	61 (1968)	1507 (34723)
NET TOXIC DISCHARGES				
LAKE SUPERIOR	88 (2430)			88 (2430)
LAKE MICHIGAN	7 (226)			7 (226)
LAKE HURON	281 (9065)			281 (9065)
LAKE ERIE	476 (12145)	3 (97)	4 (129)	483 (12371)
TOTAL	852 (22666)	96 (2903)	21 (677)	969 (23546)
WASTEWATER TREATMENT PLANT DISCHARGES				
LAKE SUPERIOR	3424 (107226)			3424 (107226)
LAKE MICHIGAN	78 (2510)			78 (2510)
LAKE HURON	728 (23147)			728 (23147)
LAKE ERIE	4130 (153225)	75 (2419)	110 (3548)	4315 (159292)
TOTAL	5240 (188308)	379 (12225)	194 (6347)	5813 (197880)
SEWAGE TREATMENT PLANT DISCHARGES				
LAKE SUPERIOR	413 (12032)			413 (12032)
LAKE MICHIGAN	13 (410)			13 (410)
LAKE HURON	832 (26835)			832 (26835)
LAKE ERIE	1214 (30200)	1 (32)	1 (32)	1216 (30264)
TOTAL	2460 (79077)	276 (8449)	74 (2347)	2810 (81763)
INDUSTRIAL WASTEWATER DISCHARGES				
LAKE SUPERIOR	4035 (130161)			4035 (130161)
LAKE MICHIGAN	64 (2190)			64 (2190)
LAKE HURON	257 (8290)			257 (8290)
LAKE ERIE	4360 (146645)	14 (516)	114 (3677)	4734 (150832)
TOTAL	8616 (281196)	128 (4032)	139 (4405)	8883 (285633)
COMBINED DISCHARGES				
LAKE SUPERIOR	92705 (2990480)			92705 (2990480)
LAKE MICHIGAN	1422 (45471)			1422 (45471)
LAKE HURON	165794 (5308194)			165794 (5308194)
LAKE ERIE	249921 (8343500)	4971 (160355)	2445 (91774)	257337 (8359729)
TOTAL	364820 (11348003)	9585 (309194)	2117 (68200)	376522 (11417403)
SILICA				
LAKE SUPERIOR	15745 (509194)			15745 (509194)
LAKE MICHIGAN	347 (12440)			347 (12440)
LAKE HURON	541 (18067)			541 (18067)
LAKE ERIE	16733 (530775)	242 (7406)	474 (15290)	17449 (535070)
TOTAL	17265 (539276)	290 (9355)	66 (2129)	17621 (541630)

BASEL LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1971 (AVE DAILY LOADS IN KG/DAY)

	NET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	238 (7933)				238 (7933)
NO. POINT	28 (933)	1 (33)	5 (167)	14 (467)	48 (1600)
POINT	542 (18067)	67 (2233)	203 (6767)	41 (1367)	853 (28434)
TOTAL	808 (26933)	68 (2266)	208 (6934)	55 (1834)	1139 (37967)
ORTHO PHOSPHORUS					
LAKE HURON	85 (2833)				85 (2833)
NO. POINT	7 (233)	2 (67)	3 (100)	3 (100)	15 (500)
POINT	272 (9067)	32 (1067)	89 (2967)	21 (700)	414 (13801)
TOTAL	364 (12133)	34 (1134)	92 (3067)	24 (800)	514 (17134)
NITRATE-NITRITE NITROGEN					
LAKE HURON	3217 (107233)				3217 (107233)
NO. POINT	71 (2367)	105 (3500)	134 (4467)	34 (1133)	344 (11467)
POINT	764 (23467)	159 (5300)	298 (9933)	84 (2800)	1245 (41500)
TOTAL	3992 (133067)	264 (8800)	432 (14400)	118 (3933)	4806 (160200)
AMMONIA NITROGEN					
LAKE HURON	361 (12033)				361 (12033)
NO. POINT	14 (467)	1 (33)	3 (100)	2 (67)	20 (667)
POINT	605 (20433)	111 (3700)	278 (9267)	68 (2267)	1262 (42067)
TOTAL	1180 (39333)	112 (3733)	281 (9367)	70 (2334)	1643 (54767)
ORGANIC NITROGEN					
LAKE HURON	3904 (130133)				3904 (130133)
NO. POINT	71 (2367)	4 (133)	27 (900)	112 (3733)	214 (7133)
POINT	249 (8300)	53 (1767)	115 (3833)	29 (967)	446 (14867)
TOTAL	4224 (140800)	57 (1900)	142 (4733)	141 (4700)	4564 (152133)
CHLORIDE					
LAKE HURON	89714 (2990467)				89714 (2990467)
NO. POINT	1349 (45300)	1461 (62033)	12413 (413767)	2366 (78867)	18029 (600967)
POINT	143064 (5435467)	4701 (156700)	9433 (314433)	2050 (68333)	179248 (5974933)
TOTAL	250167 (842234)	6562 (218733)	21846 (728200)	4416 (147200)	286991 (9566367)
SILICA					
LAKE HURON	15275 (509167)				15275 (509167)
NO. POINT	345 (11167)	410 (13667)	443 (14767)	404 (13467)	1652 (55067)
POINT	542 (18067)	147 (4900)	286 (9533)	64 (2133)	1039 (34633)
TOTAL	16212 (540401)	557 (18567)	729 (24300)	468 (15600)	17966 (598867)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1971
(AVERAGE DAILY LOADS IN KG/DAY)

	DEL/ST. CLER BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	291 (7774)	2 (65)	6 (194)	13 (419)	241 (7774)
GOV. POINT	29 (935)	72 (2323)	207 (6677)	42 (1355)	50 (1613)
POINT	561 (18097)	74 (2344)	213 (6871)	55 (1774)	882 (28452)
TOTAL	881 (26406)				1173 (37839)
ORTHOPHOSPHORUS					
LAKE HURON	86 (2774)	3 (97)	4 (129)	3 (97)	86 (2774)
GOV. POINT	7 (226)	34 (1097)	91 (2935)	21 (677)	17 (549)
POINT	241 (9065)	37 (1194)	95 (3064)	24 (774)	427 (13774)
TOTAL	374 (12065)				530 (17097)
NITRATE-NITRATE-NITROGEN					
LAKE HURON	3256 (105032)	178 (5742)	172 (5548)	22 (710)	3256 (105032)
GOV. POINT	74 (2516)	162 (5226)	308 (9935)	88 (2839)	450 (14516)
POINT	733 (23685)	340 (10968)	480 (15483)	110 (3549)	1291 (41645)
TOTAL	4067 (131193)				4997 (161193)
AMMONIA NITROGEN					
LAKE HURON	365 (11774)	4 (129)	11 (355)	2 (65)	365 (11774)
GOV. POINT	13 (419)	120 (3871)	283 (9129)	69 (2226)	30 (968)
POINT	433 (26871)	124 (4000)	294 (9484)	71 (2291)	1305 (42097)
TOTAL	1211 (39644)				1700 (54839)
ORGANIC NITROGEN					
LAKE HURON	3952 (127484)	7 (226)	34 (1097)	114 (3677)	3952 (127484)
GOV. POINT	70 (2250)	60 (1935)	113 (3645)	30 (968)	225 (7250)
POINT	259 (8355)	67 (2161)	147 (4742)	144 (4645)	462 (14903)
TOTAL	4281 (138097)				4639 (149645)
CHLORIDE					
LAKE HURON	90801 (2929065)	3473 (124935)	27396 (883742)	2240 (72258)	90801 (2929065)
GOV. POINT	1912 (61677)	4835 (155968)	9745 (314355)	2118 (68323)	35421 (1142612)
POINT	165893 (5351387)	8708 (280903)	37141 (1198097)	4358 (140581)	182591 (580033)
TOTAL	258606 (8342129)				306813 (9961710)
SILICA					
LAKE HURON	15460 (498710)	542 (17484)	450 (14516)	388 (12516)	15460 (498710)
GOV. POINT	412 (13290)	150 (4834)	295 (9516)	66 (2129)	1792 (57806)
POINT	561 (18097)	692 (22323)	745 (24032)	454 (14645)	1872 (59581)
TOTAL	16433 (530097)				18324 (591097)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1971
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURRAY	231 (7700)	5 (167)	21 (700)	12 (400)	231 (7700)
POINTE A LA PUE	34 (1133)	62 (2067)	203 (6767)	42 (1400)	72 (2400)
POINTE A LA PUE	542 (18067)	67 (2234)	224 (7467)	54 (1800)	849 (28301)
TOTAL	807 (26800)				1152 (38401)
ORTHOPHOSPHORUS					
LAKE MURRAY	82 (2733)	3 (100)	4 (133)	1 (33)	82 (2733)
POINTE A LA PUE	9 (300)	31 (1033)	89 (2967)	21 (700)	17 (566)
POINTE A LA PUE	272 (9067)	34 (1133)	93 (3100)	22 (733)	413 (13767)
TOTAL	363 (12100)				512 (17066)
NITRATE-NITRITE-NITROGEN					
LAKE MURRAY	3116 (103867)	256 (8533)	450 (15000)	42 (1400)	3116 (103867)
POINTE A LA PUE	140 (4667)	128 (4267)	299 (9967)	74 (2600)	848 (29600)
POINTE A LA PUE	704 (23400)	364 (12800)	749 (24967)	120 (4000)	1213 (40434)
TOTAL	3960 (132134)				5217 (173901)
AMMONIA-NITROGEN					
LAKE MURRAY	350 (11667)	10 (333)	45 (1500)	3 (100)	350 (11667)
POINTE A LA PUE	14 (467)	116 (3867)	275 (9167)	66 (2200)	72 (2400)
POINTE A LA PUE	404 (26933)	126 (4200)	320 (10667)	69 (2300)	1265 (42167)
TOTAL	1172 (39167)				1687 (56234)
ORGANIC-NITROGEN					
LAKE MURRAY	3742 (126567)	25 (833)	86 (2867)	115 (3833)	3762 (126067)
POINTE A LA PUE	41 (1367)	47 (1567)	116 (3867)	29 (967)	307 (10233)
POINTE A LA PUE	250 (8333)	72 (2400)	202 (6734)	144 (4800)	442 (14734)
TOTAL	4113 (137100)				4531 (151034)
CHLORIDE					
LAKE MURRAY	86911 (2897033)	5203 (173433)	53742 (1791400)	2238 (74600)	86911 (2897033)
POINTE A LA PUE	2417 (80567)	4094 (138467)	9476 (315867)	2050 (68333)	63600 (2120000)
POINTE A LA PUE	150952 (5331733)	9297 (309900)	63218 (2107267)	4288 (142933)	175572 (5852400)
TOTAL	249280 (8304333)				326083 (10869433)
SILICA					
LAKE MURRAY	14798 (493267)	399 (13300)	425 (27500)	484 (16267)	14798 (493267)
POINTE A LA PUE	464 (15467)	144 (4800)	245 (9500)	64 (2133)	2176 (72534)
POINTE A LA PUE	502 (16767)	543 (18100)	1110 (37000)	552 (18400)	1035 (34500)
TOTAL	15464 (522001)				18009 (600301)

AD-A132 454 LAKE ERIE NUTRIENT LOADS 1970-1980(U) CORPS OF
ENGINEERS BUFFALO NY BUFFALO DISTRICT
S M YAKSICH ET AL. SEP 82

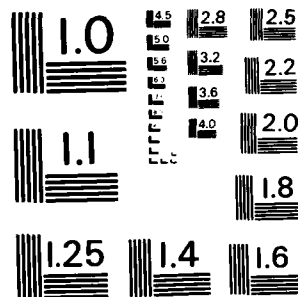
LAKE ERIE NUTRIENT LOADS 1970-1980(U) CORPS OF
ENGINEERS BUFFALO NY BUFFALO DISTRICT
S M YAKSICH ET AL. SEP 82

2/3

UNCLASSIFIED F/G 13/2 NL

F/G 13/2

NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

BASIN LOADINGS IN METRIC TONS PER MONTH FUP DECEMBER, 1971
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	234 (7548)	189 (6097)	188 (4774)	83 (2677)	234 (7548)
FUP POINT	96 (2903)	140 (4516)	261 (8419)	45 (1452)	510 (16451)
POINT	565 (18224)	329 (10613)	409 (13193)	128 (4129)	1011 (32613)
TOTAL	895 (28677)				1755 (56612)
ORTHOPHOSPHORUS					
LAKE HURON	83 (2677)	14 (452)	12 (387)	6 (194)	83 (2677)
FUP POINT	26 (839)	70 (2258)	115 (3710)	22 (710)	58 (1872)
POINT	284 (9161)	84 (2710)	127 (4097)	28 (904)	491 (15839)
TOTAL	393 (12677)				632 (20586)
NITRATE-NITRITE NITROGEN					
LAKE HURON	3161 (101968)	3130 (100968)	1210 (39032)	461 (14871)	3161 (101968)
FUP POINT	1109 (35774)	174 (5613)	317 (10226)	88 (2839)	5910 (190483)
POINT	740 (23871)	3304 (108581)	1527 (49258)	549 (17710)	1319 (42549)
TOTAL	5010 (161613)				10390 (335162)
AMMONIA NITROGEN					
LAKE HURON	355 (11452)	9 (290)	224 (7226)	31 (1000)	355 (11452)
FUP POINT	51 (1645)	168 (5419)	348 (11226)	84 (2710)	315 (10161)
POINT	839 (27065)	177 (5709)	572 (18452)	115 (3710)	1439 (46420)
TOTAL	1245 (40162)				2109 (68033)
ORGANIC NITROGEN					
LAKE HURON	3837 (123774)	327 (10548)	444 (14323)	261 (8419)	3837 (123774)
FUP POINT	277 (8935)	66 (2129)	123 (3968)	30 (968)	1309 (42225)
POINT	261 (8419)	393 (12677)	567 (18291)	291 (9387)	480 (15484)
TOTAL	4375 (141124)				5626 (181483)
CHLORIDE					
LAKE HURON	88152 (2843613)	23699 (764484)	91593 (2954613)	6431 (207452)	88152 (2843613)
FUP POINT	17207 (55065)	4858 (156710)	9824 (316903)	2118 (69323)	138930 (4481614)
POINT	170553 (5501710)	28557 (921194)	101417 (3271516)	8549 (275775)	187353 (6043646)
TOTAL	275912 (8900344)				414435 (13368073)
SILICA					
LAKE HURON	15009 (484161)	6006 (193742)	3491 (112613)	1910 (61613)	15009 (484161)
FUP POINT	1708 (55097)	152 (4903)	296 (9548)	66 (2129)	13115 (423065)
POINT	561 (18097)	6158 (198645)	3787 (122141)	1976 (63742)	1075 (34677)
TOTAL	17278 (557355)				29199 (941903)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JANUARY, 1972
(AVE DAILY LOADS IN KG/DAY)

	UP/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
Lake Huron	228 (7355)	66 (2129)	64 (2065)	44 (1419)	228 (7355)
NO. POINT	95 (3065)	137 (4419)	230 (7419)	37 (1194)	269 (8678)
Point	600 (19355)	203 (6548)	294 (9484)	81 (2613)	1004 (32387)
TOTAL	923 (29775)				1501 (48420)
ORTHOPHOSPHORUS					
Lake Huron	99 (3194)	20 (645)	12 (387)	6 (194)	99 (3194)
NO. POINT	24 (774)	69 (2226)	101 (3258)	18 (581)	62 (2000)
Point	301 (9710)	89 (2871)	113 (3645)	24 (775)	489 (15775)
TOTAL	424 (13678)				650 (20969)
NITRATE-NITRITE-NITROGEN					
Lake Huron	3110 (100323)	2751 (88742)	645 (20548)	356 (11404)	3110 (100323)
NO. POINT	1123 (36226)	191 (6161)	330 (10645)	92 (2988)	5115 (165000)
Point	770 (24830)	2942 (94993)	1215 (39193)	448 (14452)	1383 (44613)
TOTAL	5003 (161383)				9608 (309936)
AMMONIA NITROGEN					
Lake Huron	206 (6645)	25 (806)	114 (3677)	19 (613)	206 (6645)
NO. POINT	46 (1484)	207 (7968)	358 (11548)	86 (2774)	204 (6580)
Point	877 (28290)	272 (8774)	472 (15225)	105 (3367)	1568 (50580)
TOTAL	1129 (36419)				1978 (63805)
ORGANIC NITROGEN					
Lake Huron	2892 (93290)	272 (8774)	291 (9387)	236 (7613)	2892 (93290)
NO. POINT	276 (8903)	72 (2323)	129 (4161)	32 (1032)	1075 (34677)
Point	272 (8774)	344 (11097)	470 (15448)	248 (8045)	505 (16290)
TOTAL	3440 (110567)				4072 (134257)
CHLORIDE					
Lake Huron	90188 (2909290)	28088 (906065)	102524 (3307355)	5406 (174387)	90188 (2909290)
NO. POINT	13476 (434710)	5193 (167516)	10357 (334097)	2221 (71645)	149498 (4822517)
Point	167340 (5399065)	33281 (1073501)	112485 (3641452)	7627 (246032)	185111 (5971323)
TOTAL	271004 (8742065)				424797 (13703130)
SILICA					
Lake Huron	15009 (484161)	5298 (170903)	2491 (80355)	1383 (44613)	15009 (484161)
NO. POINT	1724 (55742)	162 (5226)	311 (10032)	69 (2226)	10900 (351613)
Point	583 (18806)	5460 (176129)	2802 (90387)	1452 (46839)	1125 (36290)
TOTAL	17320 (558709)				27034 (872064)

BASIN LOADINGS 1st FETRIC TONS PER MONTH FOR FEBRUARY, 1972
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	211 (7274)	1 (34)	38 (1310)	24 (820)	211 (484161)
ADJ. POINT	89 (1690)		208 (7172)	33 (1130)	112 (3862)
POLIT	558 (19241)	77 (2655)	246 (8483)	57 (1966)	876 (30206)
TOTAL	814 (24207)	78 (2690)			1199 (41346)
UNITED PHOSPHORUS					
LAKE MURON	91 (3138)				91 (484161)
ADJ. POINT	14 (621)	4 (138)	6 (207)	5 (172)	33 (1130)
POLIT	280 (9655)	37 (1276)	91 (3138)	16 (552)	424 (14621)
TOTAL	385 (13414)	41 (1414)	97 (3345)	21 (724)	548 (18897)
NITRATE-NITRITE NITROGEN					
LAKE MURON	2882 (99379)				2882 (484161)
ADJ. POINT	399 (13759)	145 (5000)	530 (18276)	115 (3960)	1189 (41001)
POLIT	720 (24820)	174 (6000)	309 (10655)	86 (2966)	1289 (44449)
TOTAL	4001 (137966)	319 (11000)	839 (28931)	201 (6931)	5360 (184828)
AMMONIA NITROGEN					
LAKE MURON	191 (6586)				191 (484161)
ADJ. POINT	31 (1049)	1 (34)	77 (2655)	8 (130)	113 (3896)
POLIT	817 (28172)	154 (5310)	322 (11103)	72 (2483)	1365 (47068)
TOTAL	1039 (35824)	155 (5345)	399 (13759)	76 (2621)	1669 (57553)
ORGANIC NITROGEN					
LAKE MURON	2680 (92414)				2680 (484161)
ADJ. POINT	125 (4310)	31 (1069)	185 (6379)	163 (5621)	504 (17379)
POLIT	254 (8759)	66 (2276)	120 (4138)	30 (1034)	470 (16207)
TOTAL	3059 (105483)	97 (3345)	305 (10517)	193 (6655)	3654 (126000)
CHLORIDE					
LAKE MURON	83577 (2841966)				83577 (484161)
ADJ. POINT	7497 (258517)	6659 (229621)	83824 (2890483)	3342 (115241)	101322 (3493862)
POLIT	155195 (5351552)	4858 (167517)	9689 (334103)	2078 (71655)	171820 (5920827)
TOTAL	246269 (8492034)	11517 (397138)	93513 (3224586)	5420 (186897)	356719 (12300655)
SILICA					
LAKE MURON	13909 (479621)				13909 (484161)
ADJ. POINT	790 (27201)	1029 (35483)	1696 (58483)	771 (26586)	4286 (147793)
POLIT	545 (18793)	152 (5241)	291 (10034)	65 (2241)	1053 (36309)
TOTAL	15244 (525655)	1181 (40724)	1987 (68517)	836 (28620)	19248 (663724)

BASIN LOADINGS IN ELECTRIC TONS PER MONTH FOR MARCH, 1972 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	218 (7032)	373 (12032)	570 (18387)	259 (8355)	218 (7032)
NO. POINT	438 (14129)	140 (4516)	200 (7782)	37 (1194)	1640 (52903)
POINT	609 (19645)	513 (16548)	810 (26129)	296 (9549)	1026 (33097)
TOTAL	1265 (40806)				2884 (93032)
ORTHO PHOSPHORUS					
LAKE MURDOCK	95 (3065)	72 (2323)	83 (2677)	26 (839)	95 (3065)
NO. POINT	101 (3258)	70 (2258)	118 (3806)	19 (613)	282 (9097)
POINT	305 (9839)	142 (4581)	201 (6483)	45 (1452)	512 (16516)
TOTAL	501 (16162)				889 (28678)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	2079 (96097)	5190 (167419)	3648 (117677)	1412 (45548)	2979 (96097)
NO. POINT	4834 (155935)	200 (6452)	330 (10645)	92 (2968)	15084 (486579)
POINT	778 (24839)	5390 (173871)	3978 (128322)	1504 (48516)	1392 (44904)
TOTAL	4553 (276871)				19455 (627580)
AMMONIA NITROGEN					
LAKE MURDOCK	198 (6387)	141 (4548)	479 (15452)	114 (3677)	198 (6387)
NO. POINT	264 (8516)	260 (8387)	415 (13387)	110 (3548)	998 (32193)
POINT	485 (28548)	401 (12935)	894 (28839)	224 (7225)	1670 (53870)
TOTAL	1347 (43451)				2866 (92450)
ORGANIC NITROGEN					
LAKE MURDOCK	2776 (89355)	744 (24000)	1311 (42290)	742 (23935)	2776 (89355)
NO. POINT	1147 (37000)	74 (2387)	129 (4161)	32 (1032)	3944 (127225)
POINT	272 (8774)	818 (26387)	1449 (46451)	774 (24967)	507 (16354)
TOTAL	4189 (135129)				7221 (232934)
CHLORIDE					
LAKE MURDOCK	96377 (2786355)	40230 (1426774)	124110 (4003548)	15087 (486677)	86377 (2786355)
NO. POINT	49333 (1591387)	5193 (167516)	10357 (334097)	2221 (71645)	232760 (750386)
POINT	170454 (5511504)	49423 (1594290)	134467 (4337645)	17308 (558322)	188629 (6084806)
TOTAL	306564 (9899290)				507766 (16379547)
SILICA					
LAKE MURDOCK	14375 (463710)	9552 (308129)	9588 (309290)	4223 (136226)	14375 (463710)
NO. POINT	6114 (197355)	162 (5226)	311 (10032)	69 (2226)	29481 (951000)
POINT	543 (18206)	9714 (313355)	9849 (314322)	4292 (138452)	1125 (36290)
TOTAL	21076 (679471)				44081 (1451000)

WAST. LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1972

(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	213 (7100)	969 (32300)	373 (12433)	673 (22433)	213 (7100)
ADJ. POINT	454 (15267)	134 (4533)	235 (7767)	35 (1167)	2473 (82033)
PULIT	591 (19700)	1105 (36833)	606 (20200)	708 (23600)	995 (33167)
TOTAL	1262 (42067)				3681 (122700)
UNITED PHOSPHORUS					
LAKE MURON	92 (3067)	164 (5600)	64 (2133)	63 (2100)	92 (3067)
ADJ. POINT	101 (3347)	68 (2267)	102 (3400)	18 (600)	396 (13200)
PULIT	295 (9833)	236 (7867)	164 (5533)	81 (2700)	823 (16100)
TOTAL	488 (16267)				971 (32367)
NITRATE-NITRITE NITROGEN					
LAKE MURON	2911 (97033)	6988 (232933)	2969 (98967)	2252 (75067)	2911 (97033)
ADJ. POINT	9452 (108400)	198 (6600)	320 (10667)	88 (2933)	14461 (55367)
PULIT	745 (24933)	7146 (239533)	3289 (109634)	2340 (78000)	1351 (45033)
TOTAL	4108 (270266)				20923 (697433)
AMMONIA NITROGEN					
LAKE MURON	193 (6433)	300 (10000)	278 (9267)	168 (5600)	193 (6433)
ADJ. POINT	254 (8500)	252 (8400)	395 (13167)	107 (3567)	1004 (33467)
PULIT	856 (28533)	552 (18400)	673 (22434)	275 (9167)	1610 (53667)
TOTAL	1307 (43566)				2007 (93567)
ORGANIC NITROGEN					
LAKE MURON	2707 (90233)	1423 (47433)	479 (29300)	1044 (34800)	2707 (90233)
ADJ. POINT	1152 (38400)	72 (2400)	124 (4133)	30 (1000)	4494 (149933)
PULIT	263 (8767)	1495 (49833)	1003 (33433)	1074 (35800)	449 (16300)
TOTAL	4122 (137400)				7694 (256466)
CHLORIDE					
LAKE MURON	84410 (2813667)	62666 (208867)	102256 (3409533)	23101 (770033)	84410 (2813667)
ADJ. POINT	58644 (1954267)	5025 (167500)	10023 (334100)	2150 (71667)	246711 (8223700)
PULIT	165347 (5511567)	67691 (2256367)	112279 (3742633)	25251 (841700)	142545 (6084834)
TOTAL	308445 (10241501)				513666 (17122201)
SILICA					
LAKE MURON	14044 (468267)	13238 (441267)	7346 (240867)	6103 (203433)	14044 (468267)
ADJ. POINT	5751 (191700)	157 (5233)	301 (10033)	67 (2233)	32438 (1081267)
PULIT	564 (18800)	13395 (446500)	7647 (254900)	6170 (205666)	1049 (36299)
TOTAL	20363 (674767)				47575 (1585833)

WASTEWATER LOADINGS IN METRIC TONS PER MONTH FOR MAY, 1972
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	230 (7419)	100 (3226)	108 (3484)	67 (2161)	230 (7419)
WON. POINT	98 (3032)	140 (4516)	229 (7367)	37 (1194)	369 (11903)
POINT	601 (19387)	240 (7742)	337 (10871)	104 (3355)	1007 (32484)
TOTAL	925 (29838)				1606 (51806)
ORTHO PHOSPHORUS					
LAKE MURON	100 (3226)	17 (548)	18 (581)	11 (355)	100 (3226)
WON. POINT	25 (806)	70 (2258)	99 (3194)	18 (581)	71 (2290)
POINT	302 (9742)	87 (2806)	117 (3775)	29 (936)	489 (15775)
TOTAL	427 (13774)				660 (21291)
NITRATE-NITRITE NITROGEN					
LAKE MURON	3140 (101290)	2904 (93677)	1975 (63710)	603 (19452)	3140 (101290)
WON. POINT	1004 (32516)	199 (6419)	330 (10645)	92 (2968)	6490 (209355)
POINT	770 (24839)	3103 (100096)	2305 (74355)	695 (22420)	1391 (44871)
TOTAL	4918 (158645)				11021 (355516)
AMMONIA NITROGEN					
LAKE MURON	209 (6742)	21 (677)	73 (2355)	24 (774)	209 (6742)
WON. POINT	44 (1419)	199 (6419)	355 (11452)	101 (3258)	162 (5225)
POINT	877 (28290)	220 (7096)	428 (13807)	125 (4032)	1332 (49419)
TOTAL	1130 (36451)				1903 (61386)
ORGANIC NITROGEN					
LAKE MURON	2019 (94161)	214 (6903)	347 (11194)	282 (9097)	2919 (94161)
WON. POINT	275 (8871)	74 (2387)	129 (4161)	32 (1032)	1118 (36065)
POINT	272 (8774)	298 (9290)	476 (15355)	314 (10129)	507 (16354)
TOTAL	3466 (111406)				4544 (146580)
CHLORIDE					
LAKE MURON	91035 (2936613)	26165 (844032)	100198 (3232194)	7562 (243935)	91035 (2936613)
WON. POINT	18466 (595677)	5193 (167516)	10357 (334097)	2221 (71645)	152391 (4915838)
POINT	170654 (5511544)	31358 (1011548)	110555 (3566291)	9783 (315580)	108629 (6084806)
TOTAL	240359 (9044434)				432055 (13937257)
SILICA					
LAKE MURON	15150 (488710)	6170 (199032)	3575 (115323)	1652 (53290)	15150 (488710)
WON. POINT	1690 (50516)	162 (5226)	311 (10032)	69 (2226)	13087 (422161)
POINT	543 (16806)	6332 (204254)	3896 (125355)	1721 (55516)	1125 (36290)
TOTAL	17423 (562032)				29362 (947161)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JUNE, 1972
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	228 (7600)				228 (7600)
POINTE POINT	44 (1467)	44 (1467)	212 (7067)	186 (6200)	486 (16201)
FOUNTAIN	576 (19200)	129 (4300)	226 (7533)	35 (1167)	966 (32200)
TOTAL	848 (28267)	173 (5767)	438 (14600)	221 (7367)	1680 (56001)
ORTHOPHOSPHORUS					
LAKE MURDOCK	98 (3267)				98 (3267)
POINTE POINT	10 (3267)	1 (33)	12 (400)	31 (1033)	58 (1933)
FOUNTAIN	289 (9633)	52 (1733)	94 (3133)	18 (600)	453 (15099)
TOTAL	401 (13367)	53 (1766)	106 (3533)	49 (1633)	609 (20299)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	3109 (103633)				3109 (103633)
POINTE POINT	292 (9733)	1153 (38433)	990 (33000)	504 (16800)	2939 (97966)
FOUNTAIN	700 (24000)	178 (5933)	320 (10667)	84 (2933)	1330 (44333)
TOTAL	4105 (138166)	1331 (44366)	1310 (43667)	592 (19733)	7378 (245932)
AMMONIA NITROGEN					
LAKE MURDOCK	206 (6867)				206 (6867)
POINTE POINT	23 (767)	0 (0)	145 (4833)	57 (1900)	225 (7500)
FOUNTAIN	844 (28133)	153 (5100)	332 (11067)	89 (2967)	1418 (47267)
TOTAL	1073 (35767)	153 (5100)	477 (15900)	146 (4867)	1849 (61634)
ORGANIC NITROGEN					
LAKE MURDOCK	2891 (96367)				2891 (96367)
POINTE POINT	117 (3900)	89 (2967)	391 (13033)	594 (19800)	1191 (39700)
FOUNTAIN	263 (8767)	67 (2233)	124 (4133)	30 (1000)	484 (16133)
TOTAL	3271 (109634)	156 (5200)	515 (17166)	624 (20800)	4566 (152200)
CHLORIDE					
LAKE MURDOCK	90147 (3004900)				90147 (3004900)
POINTE POINT	4046 (134867)	11309 (376967)	82781 (2759367)	6979 (232633)	106015 (3533838)
FOUNTAIN	162434 (5428000)	5025 (167500)	10023 (334100)	2150 (71667)	180032 (6001067)
TOTAL	257927 (8597567)	16334 (544467)	92804 (3093467)	9129 (304300)	376194 (12539801)
SILICA					
LAKE MURDOCK	15003 (500100)				15003 (500100)
POINTE POINT	693 (23100)	2725 (90633)	3270 (109000)	1025 (60833)	4513 (283766)
FOUNTAIN	564 (18400)	157 (5233)	301 (10033)	67 (2233)	1049 (36299)
TOTAL	16260 (542000)	2882 (96066)	3571 (119033)	1892 (63066)	28605 (820165)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JULY, 1972
(AVE DAILY LOADS IN KG/DAY)

	PET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	237 (7645)	122 (3935)	40 (1290)	35 (1129)	237 (7645)
LAKE POWELL	53 (1710)	136 (4387)	227 (7323)	37 (1194)	250 (8064)
POINT	597 (19254)	258 (8322)	267 (8613)	72 (2323)	997 (32162)
TOTAL	887 (28613)				1484 (47871)
ORTHO PHOSPHORUS					
LAKE MURDOCK	102 (3290)	8 (258)	7 (226)	8 (258)	102 (3290)
LAKE POWELL	15 (484)	66 (2124)	98 (3161)	18 (581)	38 (1226)
POINT	299 (9653)	74 (2387)	105 (3387)	26 (839)	481 (15516)
TOTAL	416 (13419)				621 (20032)
NITRATE-NITRATE NITROGEN					
LAKE MURDOCK	3227 (104097)	2480 (80000)	788 (25419)	311 (10032)	3227 (104097)
LAKE POWELL	375 (12097)	185 (5968)	330 (10645)	92 (2964)	3954 (127548)
POINT	770 (24839)	2665 (85968)	1114 (36064)	403 (13000)	1377 (44420)
TOTAL	4372 (141033)				4558 (276065)
AMMONIA NITROGEN					
LAKE MURDOCK	214 (6903)	2 (65)	53 (1710)	10 (323)	214 (6903)
LAKE POWELL	24 (774)	167 (5387)	340 (10968)	86 (2774)	89 (2872)
POINT	873 (28161)	169 (5452)	393 (12678)	96 (3097)	1466 (47290)
TOTAL	1111 (35838)				1769 (57065)
ORGANIC NITROGEN					
LAKE MURDOCK	3001 (96806)	232 (7484)	202 (6516)	205 (6613)	3001 (96806)
LAKE POWELL	187 (4742)	70 (2258)	129 (4161)	32 (1032)	786 (25355)
POINT	272 (8774)	302 (9742)	331 (10677)	237 (7645)	503 (16225)
TOTAL	3420 (110322)				4290 (138366)
CHLORIDE					
LAKE MURDOCK	93575 (3018548)	17737 (572161)	76973 (2483000)	4870 (157097)	93575 (3018548)
LAKE POWELL	6974 (224968)	5193 (167516)	10357 (334097)	2221 (71645)	106554 (3437226)
POINT	169221 (5458742)	22930 (739677)	87330 (2817097)	7091 (228742)	186992 (6032000)
TOTAL	269770 (8702258)				387121 (12487774)
SILICA					
LAKE MURDOCK	15573 (502355)	4914 (158516)	2107 (67968)	1059 (34161)	15573 (502355)
LAKE POWELL	861 (2774)	162 (5226)	311 (10032)	69 (2226)	1241 (39849)
POINT	543 (1806)	5076 (163742)	2418 (78000)	1128 (36347)	7125 (22900)
TOTAL	17017 (548935)				25639 (827064)

HASIN LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1972 (AVE DAILY LOADS IN KG/DAY)

	GET/SI. CLR HASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	242 (7606)	1 (32)	18 (581)	22 (710)	242 (7606)
PUN POINT	50 (1613)		197 (6355)	34 (1097)	91 (2936)
PUN POINT	599 (19323)	93 (3006)	215 (6936)	56 (1807)	923 (29775)
TOTAL	491 (24742)	94 (3032)			1256 (40517)
ORTHO PHOSPHORUS					
LAKE MURON	104 (3355)	2 (65)	6 (194)	5 (161)	104 (3355)
PUN POINT	14 (516)		89 (2871)	17 (548)	29 (936)
PUN POINT	300 (9677)	42 (1355)	95 (3065)	22 (709)	448 (14511)
TOTAL	420 (13588)	44 (1426)			581 (19742)
NITRATE-NITRITE NITROGEN					
LAKE MURON	3300 (106452)	487 (15710)	395 (12742)	133 (4290)	3300 (106452)
PUN POINT	407 (13129)	184 (5935)	330 (10645)	92 (2964)	1422 (45871)
PUN POINT	749 (24806)	671 (21645)	725 (23587)	225 (7258)	1375 (44358)
TOTAL	4476 (145387)				6097 (196677)
AMMONIA NITROGEN					
LAKE MURON	219 (7065)	1 (32)	13 (419)	2 (65)	219 (7065)
PUN POINT	26 (839)		311 (10032)	78 (2516)	42 (1355)
PUN POINT	475 (22226)	143 (4613)	324 (10451)	80 (2581)	1407 (45387)
TOTAL	1120 (36130)	144 (4645)			1668 (53807)
ORGANIC NITROGEN					
LAKE MURON	3069 (99000)	35 (1120)	94 (3161)	143 (4613)	3069 (99000)
PUN POINT	145 (4677)	69 (2226)	117 (3774)	32 (1032)	421 (13500)
PUN POINT	272 (8774)	104 (3355)	215 (6935)	175 (5645)	490 (15806)
TOTAL	3486 (112451)				3980 (128386)
CHLORIDE					
LAKE MURON	95693 (3086871)	7681 (247774)	46514 (1500452)	3366 (108581)	95693 (3086871)
PUN POINT	5496 (193419)	5193 (167516)	10357 (334097)	2221 (71645)	63557 (2050226)
PUN POINT	167937 (5417373)	12874 (415290)	56871 (1834549)	5587 (180226)	185708 (5900581)
TOTAL	269626 (8697613)				344958 (11127678)
SILICA					
LAKE MURON	15926 (513742)	1255 (40484)	1072 (34581)	607 (19581)	15926 (513742)
PUN POINT	493 (28806)	162 (5226)	311 (10032)	69 (2226)	3427 (123452)
PUN POINT	583 (18806)	1017 (45710)	1383 (44613)	676 (21807)	1125 (36290)
TOTAL	17402 (561354)				20878 (673488)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1972
(AVERAGE DAILY LOADS IN KG/DAY)

	DET/ST. CLK. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	235 (7833)	654 (21800)	77 (2567)	17 (567)	235 (7833)
MOON POINT	33 (1100)	134 (4467)	222 (7400)	35 (1167)	781 (26034)
POLY-T	577 (19233)	746 (26267)	299 (9967)	52 (1734)	968 (32267)
TOTAL	845 (28166)				1984 (66134)
ORTHOPHOSPHORUS					
LAKE MURPHY	102 (3400)	54 (1800)	14 (467)	3 (100)	102 (3400)
MOON POINT	9 (300)	67 (2233)	96 (3200)	17 (567)	80 (2667)
POLY-T	290 (9667)	121 (4033)	110 (3667)	20 (667)	470 (15667)
TOTAL	401 (13367)				652 (21734)
NITRATE-NITRITIC NITROGEN					
LAKE MURPHY	3208 (106933)	5305 (176833)	1340 (44667)	87 (2900)	3208 (106933)
MOON POINT	131 (4367)	181 (6033)	320 (10667)	88 (2933)	683 (228767)
POLY-T	744 (24800)	5406 (182866)	1660 (55334)	175 (5833)	1333 (44033)
TOTAL	4083 (136100)				11404 (380133)
AMMONIA-NITROGEN					
LAKE MURPHY	213 (7100)	7 (233)	31 (1033)	2 (67)	213 (7100)
MOON POINT	17 (567)	202 (6733)	341 (11367)	76 (2533)	57 (1900)
POLY-T	843 (28100)	209 (6966)	372 (12400)	78 (2600)	1462 (48733)
TOTAL	1073 (35767)				1732 (57733)
ORGANIC NITROGEN					
LAKE MURPHY	2983 (99433)	673 (22433)	316 (10533)	147 (4900)	2983 (99433)
MOON POINT	94 (3267)	68 (2267)	124 (4133)	30 (1000)	1238 (41133)
POLY-T	263 (8767)	741 (24700)	444 (14666)	177 (5900)	485 (16167)
TOTAL	3340 (111467)				4702 (156733)
CHLORIDE					
LAKE MURPHY	93016 (3109533)	31226 (1040867)	74887 (2496233)	3081 (102700)	93016 (3109533)
MOON POINT	5622 (187400)	5025 (167506)	10023 (334100)	2150 (71667)	114816 (3827200)
POLY-T	165347 (5511547)	36251 (1208367)	84910 (2830333)	5231 (174367)	182545 (6084834)
TOTAL	263985 (8709500)				390377 (13012567)
SILICA					
LAKE MURPHY	15480 (516000)	10169 (338967)	2983 (99433)	664 (22133)	15480 (516000)
MOON POINT	576 (19200)	157 (5233)	301 (10033)	67 (2233)	14392 (479733)
POLY-T	544 (18800)	10326 (344200)	3284 (109466)	731 (24366)	1089 (36299)
TOTAL	16620 (554000)				30961 (1032032)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1972 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLIF BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	246 (7935)	220 (7097)	67 (2161)	38 (1226)	246 (7935)
NO. POINT	58 (1871)	139 (4484)	221 (7129)	37 (1194)	383 (12355)
POINT	606 (19355)	359 (11581)	284 (9290)	75 (2420)	997 (32162)
TOTAL	908 (29141)				1626 (52452)
ORTHOPHOSPHORUS					
LAKE MURUM	106 (3419)	22 (710)	10 (323)	8 (258)	106 (3419)
NO. POINT	16 (516)	69 (2226)	99 (3194)	18 (581)	56 (1807)
POINT	501 (9710)	91 (2936)	109 (3517)	26 (839)	447 (15711)
TOTAL	423 (13645)				649 (20937)
NITRATE-NITRITE-NITROGEN					
LAKE MURUM	3359 (108355)	3384 (109161)	1300 (41935)	314 (10129)	3359 (108355)
NO. POINT	895 (15968)	187 (6032)	330 (10645)	92 (2968)	5093 (177193)
POINT	770 (24839)	3571 (115193)	1630 (52580)	406 (13097)	1379 (44084)
TOTAL	4624 (149162)				10231 (330032)
AMMONIA-NITROGEN					
LAKE MURUM	223 (7194)	4 (129)	56 (1806)	21 (677)	223 (7194)
NO. POINT	29 (935)	194 (6258)	348 (11226)	88 (2839)	110 (3547)
POINT	876 (28258)	198 (6387)	404 (13032)	109 (3516)	1506 (48581)
TOTAL	1128 (36387)				1839 (59322)
ORGANIC NITROGEN					
LAKE MURUM	3123 (100742)	326 (10516)	252 (8129)	253 (8161)	3123 (100742)
NO. POINT	191 (6161)	70 (2258)	129 (4161)	32 (1032)	1022 (32967)
POINT	272 (8774)	396 (12774)	381 (12290)	285 (9193)	503 (16225)
TOTAL	3586 (115677)				4644 (149034)
CHLORIDE					
LAKE MURUM	97386 (3141484)	23789 (767387)	70494 (2274000)	5432 (175226)	97386 (3141484)
NO. POINT	9164 (295613)	5193 (167516)	10357 (334097)	2221 (71645)	108879 (3512226)
POINT	170858 (5511548)	28982 (934903)	80851 (2608097)	7653 (246871)	188629 (6084806)
TOTAL	277408 (8948645)				394894 (12738516)
SILICA					
LAKE MURUM	16207 (522806)	6753 (217834)	2815 (90806)	1164 (37548)	16207 (522806)
NO. POINT	1165 (37581)	162 (5226)	311 (10032)	69 (2226)	11897 (383774)
POINT	583 (18806)	6915 (223065)	3126 (100838)	1233 (39774)	1125 (36290)
TOTAL	17955 (570193)				29229 (942870)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1972
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLK. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	235 (7833)	2063 (68767)	372 (12400)	77 (2567)	235 (7833)
NO. POINT	154 (5133)	136 (4533)	233 (7767)	35 (1167)	2666 (88667)
POINT	587 (19567)	2199 (73300)	605 (20167)	112 (3734)	991 (33034)
TOTAL	976 (32533)				3892 (129734)
ORTHO PHOSPHORUS					
LAKE HURON	102 (3400)	190 (6333)	68 (2267)	13 (433)	102 (3400)
NO. POINT	48 (1600)	69 (2300)	106 (3533)	18 (600)	319 (10633)
POINT	296 (9867)	259 (8633)	174 (5800)	31 (1033)	489 (16300)
TOTAL	446 (14867)				910 (30333)
NITRATE-NITRITE-NITROGEN					
LAKE HURON	3208 (106933)	13031 (434367)	5923 (197433)	662 (22067)	3208 (106933)
NO. POINT	2016 (67200)	193 (6433)	320 (10667)	88 (2933)	21632 (721067)
POINT	745 (24833)	13224 (440800)	6245 (208100)	750 (25000)	1346 (44866)
TOTAL	5969 (198966)				26186 (872866)
AMMONIA NITROGEN					
LAKE HURON	213 (7100)	142 (4733)	253 (8433)	38 (1267)	213 (7100)
NO. POINT	98 (3267)	252 (8400)	378 (12600)	101 (3367)	531 (17700)
POINT	455 (24500)	394 (13133)	631 (21033)	139 (4634)	1546 (52867)
TOTAL	1166 (38867)				2330 (77667)
ORGANIC NITROGEN					
LAKE HURON	2983 (99433)	1480 (49333)	997 (33233)	364 (12133)	2983 (99433)
NO. POINT	500 (16667)	72 (2400)	124 (4133)	30 (1000)	3341 (111366)
POINT	263 (8767)	1552 (51733)	1121 (37366)	394 (13133)	489 (16300)
TOTAL	3746 (124867)				6813 (227099)
CHLORIDE					
LAKE HURON	93016 (3100533)	69657 (2321900)	152728 (5090933)	7993 (266433)	93016 (3100533)
NO. POINT	40914 (1363400)	5025 (167500)	10023 (334100)	2150 (71667)	271292 (9043066)
POINT	165307 (5511567)	74682 (2489400)	162751 (5425033)	10143 (338100)	182545 (608834)
TOTAL	299277 (9975900)				546853 (18228433)
SILICA					
LAKE HURON	15480 (516000)	25069 (835633)	9299 (309967)	1910 (63667)	15480 (516000)
NO. POINT	3151 (105033)	157 (5233)	301 (10033)	67 (2233)	39429 (1314300)
POINT	564 (18900)	25226 (840866)	9600 (320000)	1971 (65900)	1089 (36299)
TOTAL	19195 (639333)				55998 (1866599)

WASTW. LOADINGS IN METRIC TONS PER MONTH FOR DECEMBER 1972 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLY BASIN	WESTLWN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURKIN	238 (7677)				238 (7677)
WGN POINT	240 (7742)	967 (31194)	338 (10903)	121 (3903)	1466 (53742)
POINT	611 (19710)	141 (4548)	240 (7742)	37 (1194)	1029 (33194)
TOTAL	1089 (35129)	1108 (35742)	578 (18645)	158 (5097)	2933 (94613)
ORTHO PHOSPHORUS					
LAKE MURKIN	103 (3323)				103 (3323)
WGN POINT	67 (2161)	107 (3452)	64 (2065)	14 (452)	252 (8130)
POINT	305 (9839)	71 (2290)	113 (3645)	18 (581)	507 (16355)
TOTAL	475 (15323)	178 (5742)	177 (5710)	32 (1033)	862 (27808)
NITRATE-NITRITE NITROGEN					
LAKE MURKIN	3257 (105065)				3257 (105065)
WGN POINT	3162 (102406)	8954 (288939)	4772 (15935)	856 (27613)	17744 (572387)
POINT	779 (24859)	201 (6484)	330 (10645)	92 (2968)	1393 (44936)
TOTAL	7199 (231964)	9155 (295323)	5102 (164580)	948 (30581)	22394 (722388)
AMMONIA NITROGEN					
LAKE MURKIN	216 (6968)				216 (6968)
WGN POINT	145 (4677)	42 (1355)	251 (8097)	52 (1677)	490 (15806)
POINT	887 (28613)	259 (8355)	394 (12710)	105 (3387)	1445 (53063)
TOTAL	1248 (40258)	301 (9710)	645 (20807)	157 (5064)	2351 (75639)
ORGANIC NITROGEN					
LAKE MURKIN	3024 (97677)				3024 (97677)
WGN POINT	769 (24406)	914 (29484)	973 (31387)	474 (15290)	3130 (100967)
POINT	272 (8774)	76 (2452)	129 (4161)	32 (1032)	509 (16419)
TOTAL	4069 (131257)	990 (31936)	1102 (35548)	506 (16322)	6667 (215063)
CHLORIDE					
LAKE MURKIN	94422 (3045871)				94422 (3045871)
WGN POINT	52939 (1707710)	55954 (180968)	135708 (4377677)	9558 (308323)	254159 (8198678)
POINT	170858 (5511548)	5193 (167516)	10357 (334097)	2221 (71645)	188629 (608806)
TOTAL	318219 (10265129)	61147 (1972484)	146065 (4711774)	11779 (379968)	537210 (17329355)
SILICA					
LAKE MURKIN	15714 (506903)				15714 (506903)
WGN POINT	4599 (148355)	16542 (533613)	8267 (266677)	2565 (82742)	31973 (1031367)
POINT	583 (18806)	162 (5226)	311 (10032)	69 (2226)	1125 (36290)
TOTAL	20896 (674064)	16704 (538839)	8578 (276709)	2634 (84968)	48412 (1574580)

PASTA LOADINGS IN METRIC TONS PER 100 MT FUM JANUARY, 1973
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLK BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO	211 (6806)				211 (6806)
ADP POINT	417 (13452)	255 (8226)	112 (3613)	117 (3774)	901 (29065)
POINT	707 (22806)	112 (3613)	194 (6258)	38 (1226)	1051 (33903)
TOTAL	1335 (43064)	367 (11839)	306 (9471)	155 (5000)	2163 (69774)
ORTHO PHOSPHORUS					
LAKE MURDO	87 (2806)				87 (2806)
ADP POINT	94 (3032)	67 (2161)	19 (613)	21 (677)	201 (6483)
POINT	353 (11387)	55 (1774)	82 (2645)	18 (581)	508 (16387)
TOTAL	534 (17225)	122 (3935)	101 (3258)	39 (1258)	796 (25676)
NITRATE-NITRICE NITROGEN					
LAKE MURDO	3907 (126032)				3907 (126032)
ADP POINT	4209 (135774)	4181 (134871)	1553 (50097)	940 (30323)	10883 (351065)
POINT	906 (29226)	204 (6581)	330 (10445)	93 (3000)	1333 (44452)
TOTAL	9022 (291032)	4385 (141452)	1883 (60742)	1033 (33323)	16323 (526549)
AMMONIA NITROGEN					
LAKE MURDO	259 (8355)				259 (8355)
ADP POINT	247 (7964)	182 (5871)	107 (3452)	40 (1290)	576 (18581)
POINT	1051 (33903)	258 (8323)	361 (11645)	111 (3581)	1781 (57452)
TOTAL	1557 (50226)	440 (14194)	468 (15097)	151 (4871)	2616 (84388)
ORGANIC NITROGEN					
LAKE MURDO	3020 (123226)				3020 (123226)
ADP POINT	1152 (37161)	640 (20645)	399 (12871)	398 (12839)	2589 (83516)
POINT	320 (10323)	75 (2419)	129 (4161)	32 (1032)	556 (17935)
TOTAL	5292 (170710)	715 (23064)	528 (17032)	430 (13871)	6965 (224677)
CHLORIDE					
LAKE MURDO	118673 (3828161)				118673 (3828161)
ADP POINT	57377 (1850871)	46139 (1484355)	102899 (3319323)	12053 (388806)	218468 (7047355)
POINT	170564 (5631097)	5183 (167194)	10491 (338419)	2247 (72484)	192895 (6209194)
TOTAL	350614 (11131129)	51322 (1655549)	113390 (3657742)	14300 (461290)	529626 (17084710)
SILICA					
LAKE MURDO	15503 (500097)				15503 (500097)
ADP POINT	6038 (194774)	8255 (266290)	3465 (111774)	2528 (81548)	20286 (654386)
POINT	686 (22129)	162 (5226)	311 (10032)	70 (2258)	1229 (39645)
TOTAL	22227 (717000)	8417 (271516)	3776 (121406)	2598 (83806)	37018 (1194128)

WAST... LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1973
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	185 (6607)	107 (3821)	91 (3250)	73 (2607)	185 (6607)
SOL. POINT	117 (4174)	97 (3464)	177 (6321)	34 (1214)	388 (13857)
POINT	628 (22429)	204 (7285)	268 (9571)	107 (3821)	936 (33428)
TOTAL	930 (33215)				1509 (53892)
ORTHOPHOSPHORUS					
LAKE MURDOCK	76 (2718)	31 (1107)	15 (536)	14 (500)	76 (2718)
SOL. POINT	31 (1107)	49 (1750)	79 (2821)	16 (571)	91 (3250)
POINT	315 (11250)	40 (2857)	94 (3357)	30 (1071)	459 (16392)
TOTAL	422 (15071)				626 (22356)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	3417 (122036)	2418 (86357)	1124 (40143)	586 (20929)	3417 (122036)
SOL. POINT	1312 (46857)	178 (6357)	298 (10643)	84 (3000)	5440 (194286)
POINT	416 (29214)	2596 (92714)	1422 (50786)	670 (23929)	1378 (49214)
TOTAL	5547 (194107)				10235 (365536)
AMMONIA NITROGEN					
LAKE MURDOCK	227 (8107)	53 (1893)	93 (3321)	23 (821)	227 (8107)
SOL. POINT	76 (2500)	230 (8214)	333 (11893)	95 (3393)	239 (8535)
POINT	941 (33607)	283 (10107)	426 (15214)	118 (4214)	1599 (57107)
TOTAL	1238 (44214)				2065 (73749)
ORGANIC NITROGEN					
LAKE MURDOCK	3341 (119321)	306 (10929)	371 (13250)	269 (9607)	3341 (119321)
SOL. POINT	356 (12714)	67 (2393)	117 (4179)	28 (1000)	1302 (46500)
POINT	289 (10321)	373 (13322)	484 (17429)	297 (10607)	501 (17893)
TOTAL	3946 (142356)				5144 (183714)
CHLORIDE					
LAKE MURDOCK	103778 (3706357)	28323 (1011536)	83004 (2964429)	7878 (281357)	103778 (3706357)
SOL. POINT	18594 (664071)	4681 (167179)	9478 (338429)	2030 (72500)	137799 (4921393)
POINT	157671 (5631107)	33004 (1178715)	92480 (3302858)	9908 (353657)	173858 (6209215)
TOTAL	280043 (10001535)				415435 (14839465)
SILICA					
LAKE MURDOCK	13557 (484179)	4778 (170643)	2917 (104179)	1538 (54929)	13557 (484179)
SOL. POINT	2106 (75214)	146 (5214)	281 (10036)	63 (2250)	11339 (404965)
POINT	420 (22143)	4924 (175857)	3194 (114215)	1601 (57179)	1110 (39443)
TOTAL	16243 (581536)				26006 (928767)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH, 1973
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO	211 (6806)	1317 (42884)	695 (22419)	556 (17935)	211 (6806)
WON. POINT	989 (31903)	114 (3677)	198 (6387)	38 (1226)	3557 (114741)
POINT	707 (22806)	114 (3677)	198 (6387)	38 (1226)	1057 (34096)
TOTAL	1907 (61515)	1431 (46161)	893 (28806)	594 (19161)	4825 (155643)
ORTHO PHOSPHORUS					
LAKE MURDO	87 (2806)	234 (7508)	117 (3778)	61 (1968)	87 (2806)
WON. POINT	203 (6508)	55 (1774)	100 (3226)	19 (613)	615 (19838)
POINT	354 (11419)	289 (9322)	217 (7000)	80 (2581)	528 (17032)
TOTAL	644 (20733)	578 (18604)	434 (13998)	160 (5162)	1230 (39676)
NITRATE-NITRITIC NITROGEN					
LAKE MURDO	3907 (126032)	10301 (332290)	5314 (171548)	2390 (77097)	3907 (126032)
WON. POINT	8294 (267581)	204 (6581)	330 (10645)	93 (3000)	26304 (848516)
POINT	904 (29226)	10505 (338871)	5648 (182193)	2483 (80097)	1533 (49452)
TOTAL	13104 (422839)	11310 (366746)	6192 (200386)	2966 (95194)	31794 (1024000)
AMMONIA NITROGEN					
LAKE MURDO	259 (8355)	507 (16355)	535 (17258)	160 (5161)	259 (8355)
WON. POINT	513 (17516)	260 (8387)	405 (13065)	111 (3581)	1745 (56290)
POINT	1062 (34258)	767 (24742)	940 (30323)	271 (8742)	1838 (59291)
TOTAL	1864 (60129)	1534 (50004)	1475 (48646)	542 (17684)	3842 (123936)
ORGANIC NITROGEN					
LAKE MURDO	3820 (123226)	2271 (73258)	1617 (52161)	1058 (34129)	3820 (123226)
WON. POINT	2414 (77871)	75 (2419)	129 (4161)	32 (1032)	7360 (237419)
POINT	320 (10323)	2346 (75677)	1746 (56322)	1090 (35161)	556 (17935)
TOTAL	6554 (211420)	2653 (86153)	3549 (115149)	1280 (41522)	11736 (378580)
CHLORIDE					
LAKE MURDO	118673 (3826161)	88707 (2861516)	143692 (4635226)	25677 (828290)	118673 (3826161)
WON. POINT	127952 (4127484)	5183 (167194)	10491 (338419)	2247 (72484)	386028 (12452516)
POINT	174564 (5631097)	93894 (3028710)	154143 (4973645)	27924 (900774)	192085 (6209194)
TOTAL	421189 (13586742)	193984 (6222426)	308228 (9793090)	50648 (1653508)	697186 (22489871)
SILICA					
LAKE MURDO	15503 (500097)	17896 (577290)	12086 (389471)	6618 (213484)	15503 (500097)
WON. POINT	10400 (348516)	162 (5220)	311 (10032)	70 (2258)	47404 (1529161)
POINT	685 (22129)	18058 (582516)	12397 (399903)	6688 (215742)	1229 (39645)
TOTAL	26993 (870762)	19076 (615837)	12427 (400406)	7356 (241284)	64136 (2068903)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1973
(AVE. DAILY LOADS IN KG/DAY)

	DET/ST. CL. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	206 (6447)	237 (7900)	232 (7733)	165 (5500)	206 (6447)
SON POINT	184 (6267)	104 (3600)	192 (6400)	36 (1200)	422 (27400)
PONT	680 (22647)	345 (11500)	424 (14133)	201 (6700)	1016 (33867)
TOTAL	1070 (35401)				2044 (68134)
ORTHOPHOSPHORUS					
LAKE MURPHY	85 (2433)	70 (2333)	37 (1233)	24 (800)	85 (2433)
SON POINT	42 (1600)	53 (1767)	87 (2900)	18 (600)	179 (5966)
PONT	341 (11367)	123 (4100)	124 (4133)	42 (1400)	499 (16634)
TOTAL	474 (15600)				763 (25433)
NITRATE-NITRICE NITROGEN					
LAKE MURPHY	3015 (127167)	5054 (168467)	2200 (73333)	1082 (36067)	3015 (127167)
SON POINT	2171 (72367)	194 (6600)	319 (10633)	89 (2967)	10507 (350234)
PONT	477 (29233)	5252 (175067)	2519 (83966)	1171 (39034)	1083 (49433)
TOTAL	6463 (228767)				15805 (526834)
AMMONIA NITROGEN					
LAKE MURPHY	253 (8433)	142 (6067)	215 (7167)	69 (2300)	253 (8433)
SON POINT	114 (3800)	256 (8333)	374 (12600)	108 (3600)	580 (19334)
PONT	1014 (33800)	432 (14400)	593 (19767)	177 (5900)	1750 (58333)
TOTAL	1381 (46033)				2583 (86100)
ORGANIC NITROGEN					
LAKE MURPHY	3731 (124367)	646 (21533)	698 (23267)	518 (17267)	3731 (124367)
SON POINT	598 (19933)	73 (2433)	125 (4167)	30 (1000)	2460 (82000)
PONT	310 (10333)	719 (23966)	823 (27434)	548 (18267)	538 (17933)
TOTAL	4639 (154633)				6729 (224300)
CHLORIDE					
LAKE MURPHY	115888 (3862933)	50858 (1695267)	103438 (3447933)	12127 (404233)	115888 (3862933)
SON POINT	3822 (1297000)	5016 (167200)	10152 (338400)	2175 (72500)	205345 (6844833)
PONT	168934 (5631133)	55874 (1862467)	113590 (378333)	14302 (476733)	186277 (6209233)
TOTAL	323744 (10791466)				507510 (16916999)
SILICA					
LAKE MURPHY	15139 (504633)	9382 (312733)	5477 (182567)	2923 (97433)	15139 (504633)
SON POINT	3532 (117733)	157 (5233)	301 (10033)	68 (2267)	21314 (710466)
PONT	648 (22133)	9539 (317966)	5778 (192600)	2991 (99700)	1190 (39666)
TOTAL	19335 (644499)				37643 (1254765)

WASTE LOADINGS IN METRIC TONS PER MONTH FOR MAY, 1973
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLER BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	216 (6968)	320 (10323)	105 (5968)	90 (2903)	216 (6968)
NO. POINT	121 (3903)	110 (3548)	197 (6355)	38 (1226)	716 (23097)
PULL	696 (22452)	430 (13871)	382 (12323)	128 (4129)	1041 (33581)
TOTAL	1033 (33323)				1973 (63646)
ORTHO PHOSPHORUS					
LAKE MURDOCK	89 (2871)	33 (1065)	30 (968)	17 (548)	89 (2871)
NO. POINT	35 (1129)	55 (1774)	91 (2935)	18 (581)	115 (3710)
PULL	350 (11290)	86 (2839)	121 (3903)	35 (1129)	514 (16580)
TOTAL	474 (15290)				718 (23161)
NITRATE-NITRICE NITROGEN					
LAKE MURDOCK	3996 (128903)	3657 (117968)	2698 (87032)	785 (25323)	3996 (128903)
NO. POINT	1425 (45968)	204 (6581)	330 (10445)	93 (3000)	8565 (276291)
PULL	906 (29226)	3461 (124549)	3028 (97677)	878 (28323)	1533 (49452)
TOTAL	6327 (204097)				14094 (454646)
AMMONIA NITROGEN					
LAKE MURDOCK	265 (8548)	46 (1484)	183 (5903)	29 (935)	265 (8548)
NO. POINT	75 (2419)	207 (6677)	365 (11774)	111 (3581)	333 (10741)
PULL	1042 (33613)	253 (8161)	508 (17677)	140 (4516)	1725 (55645)
TOTAL	1342 (43580)				2323 (74934)
ORGANIC NITROGEN					
LAKE MURDOCK	3907 (126032)	401 (12935)	547 (17645)	307 (9903)	3907 (126032)
NO. POINT	400 (12903)	75 (2419)	129 (4161)	32 (1032)	1655 (53386)
PULL	329 (10323)	476 (15354)	676 (21806)	339 (10935)	556 (17935)
TOTAL	4627 (149258)				6118 (197353)
CHLORIDE					
LAKE MURDOCK	121370 (3915161)	52319 (1042548)	119623 (3858806)	9714 (313355)	121370 (3915161)
NO. POINT	34744 (1120774)	5183 (167194)	10491 (338019)	2247 (72444)	196480 (6335483)
PULL	174564 (5631097)	37502 (1209742)	130114 (4197225)	11961 (365839)	192485 (6209194)
TOTAL	330678 (10667032)				510255 (16459838)
SILICA					
LAKE MURDOCK	15055 (511452)	7360 (237419)	5097 (164419)	2096 (67613)	15055 (511452)
NO. POINT	2457 (82084)	162 (5226)	311 (10032)	70 (2256)	17110 (551935)
PULL	686 (22129)	7522 (242645)	5408 (174451)	2166 (69871)	1229 (39645)
TOTAL	19094 (614065)				34194 (1103032)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JUNE , 1973
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	216 (7200)				216 (7200)
NO. POINT	79 (2633)				1115 (37166)
POINT	640 (22667)	814 (27133)	182 (6067)	40 (1333)	1012 (33733)
TOTAL	975 (32500)	106 (3533)	190 (6333)	36 (1200)	2343 (78099)
		920 (30666)	372 (12400)	76 (2533)	
ORTHOPHOSPHORUS					
LAKE HURON	89 (2967)				89 (2967)
NO. POINT	25 (833)				151 (5033)
POINT	340 (11333)	93 (3100)	27 (900)	6 (200)	495 (16500)
TOTAL	454 (15133)	53 (1767)	85 (2833)	17 (567)	735 (24500)
		106 (3533)	112 (3733)	23 (767)	
NITRATE-NITRATE NITROGEN					
LAKE HURON	8004 (133467)				8004 (133467)
NO. POINT	946 (31533)				11389 (379633)
POINT	877 (29233)	7338 (244600)	2742 (92067)	343 (11433)	1483 (49433)
TOTAL	5627 (192733)	194 (6600)	319 (10633)	89 (2967)	16876 (562533)
		7536 (251200)	3081 (102700)	432 (14400)	
AMMONIA NITROGEN					
LAKE HURON	266 (8867)				266 (8867)
NO. POINT	50 (1667)				248 (8267)
POINT	1013 (33767)	44 (1467)	144 (4800)	10 (333)	1694 (56467)
TOTAL	1329 (44301)	244 (8133)	350 (11667)	87 (2900)	2208 (73601)
		282 (9600)	494 (16467)	97 (3233)	
ORGANIC NITROGEN					
LAKE HURON	3916 (130533)				3916 (130533)
NO. POINT	357 (11900)				1923 (64100)
POINT	316 (10333)	808 (26933)	539 (17967)	219 (7300)	538 (17933)
TOTAL	4443 (152766)	73 (2433)	125 (4167)	30 (1000)	6377 (212566)
		883 (29366)	664 (22134)	249 (8300)	
CHLORIDE					
LAKE HURON	121631 (4054367)				121631 (4054367)
NO. POINT	46899 (1363300)				203546 (678867)
POINT	16934 (5631133)	47915 (1597167)	109195 (3639833)	5537 (184567)	186277 (6209233)
TOTAL	331064 (11048800)	5016 (167200)	10152 (338400)	2175 (72500)	511454 (17088667)
		52931 (1764367)	119347 (3978233)	7712 (257067)	
SILICA					
LAKE HURON	15889 (529633)				15889 (529633)
NO. POINT	2057 (68567)				21947 (731566)
POINT	664 (22133)	13804 (460133)	4963 (165433)	1123 (37433)	1190 (39666)
TOTAL	18610 (620333)	157 (5233)	301 (10033)	68 (2267)	39026 (1308865)
		13961 (465366)	5264 (175466)	1191 (39700)	

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JULY - 1973
(AVE DAILY LOADS IN KG/DAY)

	DEL/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURKIN	225 (7258)	243 (7839)	38 (1226)	18 (581)	225 (7258)
DOE POINT	36 (1161)	109 (3516)	168 (5419)	36 (1161)	335 (10807)
POTAT	694 (22347)	352 (11355)	208 (6645)	54 (1742)	1007 (32483)
TOTAL	955 (30806)				1567 (50548)
ORTHOPHOSPHORUS					
LAKE MURKIN	93 (3000)	29 (935)	7 (226)	3 (97)	93 (3000)
DOE POINT	13 (419)	54 (1742)	73 (2355)	18 (581)	52 (1677)
POTAT	348 (11226)	83 (2677)	80 (2581)	21 (671)	493 (15904)
TOTAL	454 (14645)				433 (14051)
NITRATE-NITRITE NITROGEN					
LAKE MURKIN	4174 (134645)	3365 (108548)	1047 (33774)	90 (2903)	4174 (134645)
DOE POINT	242 (7866)	197 (6355)	330 (10645)	93 (3000)	4744 (153031)
POTAT	916 (29226)	3562 (114903)	1377 (44419)	183 (5903)	1526 (49226)
TOTAL	5332 (171677)				10444 (336902)
AMMONIA NITROGEN					
LAKE MURKIN	277 (8935)	14 (452)	6 (194)	1 (32)	277 (8935)
DOE POINT	21 (677)	211 (6806)	323 (10419)	78 (2516)	42 (1355)
POTAT	1039 (35140)	225 (7258)	329 (10613)	79 (2548)	1651 (53257)
TOTAL	1337 (43124)				1970 (63547)
ORGANIC NITROGEN					
LAKE MURKIN	4081 (131645)	332 (10710)	134 (4323)	143 (4613)	4081 (131645)
DOE POINT	141 (4548)	73 (2355)	123 (3968)	32 (1032)	750 (24194)
POTAT	327 (10323)	405 (13065)	257 (8291)	175 (5645)	548 (17678)
TOTAL	4542 (146516)				5379 (175517)
CHLORIDE					
LAKE MURKIN	126764 (4089161)	26919 (868355)	24477 (789581)	3133 (101065)	126764 (4089161)
DOE POINT	14480 (467007)	5183 (167194)	10491 (338419)	2247 (72484)	69009 (2226098)
POTAT	174560 (5631097)	32102 (1035549)	34968 (1124000)	5380 (173549)	192485 (6209194)
TOTAL	315804 (10147355)				348258 (12524453)
SILICA					
LAKE MURKIN	16560 (534194)	6753 (217839)	1470 (60323)	592 (19097)	16560 (534194)
DOE POINT	822 (26516)	162 (5226)	311 (10032)	70 (2258)	10037 (323775)
POTAT	14088 (562434)	6015 (223065)	2181 (70355)	662 (21355)	1229 (39645)
TOTAL					27826 (897614)

BASELINE LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1973 (AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURRAY	225 (7254)			225 (7254)
DOWN POINT	34 (1256)	11 (355)	16 (561)	75 (2620)
POINT	693 (22355)	166 (5355)	35 (1129)	995 (32097)
TOTAL	952 (30871)	177 (5710)	53 (1710)	1295 (41775)
ORTHOPHOSPHORUS				
LAKE MURRAY	93 (3000)			93 (3000)
DOWN POINT	13 (323)	3 (97)	4 (129)	20 (646)
POINT	347 (11190)	68 (2190)	18 (561)	474 (15292)
TOTAL	453 (14517)	71 (2291)	22 (710)	547 (16936)
NITRATE-NITRITE NITROGEN				
LAKE MURRAY	4174 (134645)			4174 (134645)
DOWN POINT	224 (7290)	403 (14290)	68 (2039)	1711 (55193)
POINT	905 (29226)	330 (10645)	93 (3000)	1519 (49000)
TOTAL	5304 (171161)	773 (24935)	161 (5039)	7404 (238836)
AMMONIA NITROGEN				
LAKE MURRAY	277 (8935)			277 (8935)
DOWN POINT	21 (677)	12 (387)	1 (32)	36 (1161)
POINT	1037 (33452)	297 (9581)	79 (2548)	1590 (51291)
TOTAL	1335 (43064)	309 (9968)	80 (2580)	1903 (61387)
ORGANIC NITROGEN				
LAKE MURRAY	4081 (131645)			4081 (131645)
DOWN POINT	149 (4806)	70 (2258)	122 (3935)	411 (13003)
POINT	320 (10323)	125 (4032)	32 (1032)	547 (17645)
TOTAL	4550 (146774)	195 (6290)	154 (4967)	5046 (162773)
CHLORIDE				
LAKE MURRAY	126764 (4089161)			126764 (4089161)
DOWN POINT	12134 (391444)	29319 (945774)	2920 (94194)	57548 (1856307)
POINT	170564 (5431097)	10491 (338419)	2247 (72484)	192460 (6200387)
TOTAL	313464 (10111742)	39810 (1284193)	5167 (166678)	376772 (12153935)
SILICA				
LAKE MURRAY	16560 (534194)			16560 (534194)
DOWN POINT	804 (25935)	945 (30484)	495 (15968)	4628 (149200)
POINT	686 (22129)	311 (10032)	70 (2258)	1229 (39495)
TOTAL	18050 (582258)	1256 (40516)	565 (18226)	22417 (723129)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1973
(AVE DAILY LOADS IN KG/DAY)

	DE/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	223 (7433)				223 (7433)
AGG. POINT	29 (967)	0 (0)	2 (67)	12 (400)	43 (1436)
POINT	665 (22167)	50 (1667)	146 (4867)	34 (1133)	895 (29834)
TOTAL	917 (30567)	50 (1667)	148 (4934)	46 (1533)	1161 (38701)
ORTHO PHOSPHORUS					
LAKE HURON	92 (3067)				92 (3067)
AGG. POINT	7 (233)	2 (67)	2 (67)	3 (100)	14 (467)
POINT	334 (11133)	25 (833)	62 (2067)	17 (567)	438 (14600)
TOTAL	433 (14433)	27 (900)	64 (2134)	20 (667)	544 (18134)
NITRATE-NITRITE NITROGEN					
LAKE HURON	4125 (137500)				4125 (137500)
AGG. POINT	73 (2433)	8 (267)	67 (2233)	30 (1000)	178 (5933)
POINT	804 (26933)	139 (4633)	313 (10433)	89 (2967)	1409 (46966)
TOTAL	5066 (168866)	147 (4900)	380 (12666)	119 (3967)	5712 (190399)
AMMONIA NITROGEN					
LAKE HURON	274 (9133)				274 (9133)
AGG. POINT	15 (500)	0 (0)	1 (33)	1 (33)	17 (566)
POINT	997 (33233)	131 (4367)	275 (9167)	74 (2467)	1477 (49234)
TOTAL	1286 (42866)	131 (4367)	276 (9200)	75 (2500)	1768 (58933)
ORGANIC NITROGEN					
LAKE HURON	4033 (134433)				4033 (134433)
AGG. POINT	73 (2433)	11 (367)	18 (600)	109 (3633)	211 (7033)
POINT	307 (10233)	51 (1700)	114 (3800)	30 (1000)	502 (16733)
TOTAL	4413 (147099)	62 (2067)	132 (4400)	139 (4633)	4746 (158199)
CHLORIDE					
LAKE HURON	125285 (4176167)				125285 (4176167)
AGG. POINT	1728 (57600)	4886 (149533)	8022 (267400)	2266 (75533)	16502 (550066)
POINT	167118 (5570600)	4304 (143467)	10146 (338200)	2175 (72500)	183743 (6124767)
TOTAL	294131 (984367)	8790 (293000)	18168 (605600)	4441 (148033)	325530 (10851000)
SILICA					
LAKE HURON	16360 (545533)				16360 (545533)
AGG. POINT	417 (13900)	292 (9733)	286 (9533)	412 (13733)	1407 (46899)
POINT	668 (22133)	152 (5067)	301 (10033)	68 (2267)	1185 (39500)
TOTAL	17407 (581566)	444 (14800)	587 (19566)	480 (16000)	18958 (631932)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1973
(AVE DAILY LOADS IN KG/DAY)

	DE/ST CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	214 (6903)	1 (32)	7 (226)	14 (452)	214 (6903)
MUN. POINT	34 (1097)	56 (1806)	164 (5290)	36 (1161)	56 (1807)
POINT	699 (22226)	57 (1836)	171 (5516)	50 (1613)	945 (30483)
TOTAL	937 (30226)				1215 (39193)
ORTHOPHOSPHORUS					
LAKE MURON	89 (2871)	3 (97)	3 (97)	3 (97)	89 (2871)
MUN. POINT	8 (258)	27 (871)	67 (2161)	18 (581)	17 (549)
POINT	345 (11129)	30 (968)	70 (2258)	21 (678)	457 (14742)
TOTAL	402 (14258)				563 (18162)
NITRATE-NITRITE NITROGEN					
LAKE MURON	3960 (127742)	20 (645)	184 (5935)	68 (2194)	3960 (127742)
MUN. POINT	113 (3645)	181 (5839)	330 (10645)	93 (3000)	345 (12419)
POINT	904 (29141)	201 (6484)	514 (16580)	161 (5194)	1508 (48645)
TOTAL	4977 (160548)				5853 (188806)
AMMONIA NITROGEN					
LAKE MURON	263 (8484)	1 (32)	20 (645)	1 (32)	263 (8484)
MUN. POINT	16 (516)	145 (4677)	301 (9710)	77 (2484)	38 (1225)
POINT	1033 (3323)	146 (4709)	321 (10355)	78 (2516)	1556 (50194)
TOTAL	1312 (42323)				1857 (59903)
ORGANIC NITROGEN					
LAKE MURON	3873 (124935)	16 (516)	52 (1677)	123 (3968)	3873 (124935)
MUN. POINT	88 (2839)	57 (1839)	129 (4161)	32 (1032)	279 (9000)
POINT	320 (10323)	73 (2355)	181 (5838)	155 (5000)	538 (17355)
TOTAL	4281 (138097)				4690 (151290)
CHLORIDE					
LAKE MURON	120291 (3880355)	6727 (217000)	43944 (1417548)	2714 (87548)	120291 (3880355)
MUN. POINT	3572 (115226)	4845 (156290)	10491 (338419)	2247 (72484)	56957 (1837322)
POINT	17126 (5524774)	11572 (373290)	54435 (1755967)	4961 (160032)	186651 (6091967)
TOTAL	295131 (9520355)				366099 (11809644)
SILICA					
LAKE MURON	15714 (506903)	443 (14290)	707 (22806)	518 (16710)	15714 (506903)
MUN. POINT	514 (16541)	162 (5226)	311 (10032)	70 (2258)	2182 (70387)
POINT	686 (22129)	605 (19516)	1018 (32838)	588 (18968)	1229 (39645)
TOTAL	16914 (545613)				19125 (616935)

BASIN LOADINGS IN METRIC TONS PER A.D.M. FOR NOVEMBER, 1973
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO CON. POINT	215 (7167)	2 (67)	77 (2567)	71 (2367)	215 (7167)
POINT	120 (4000)	91 (3033)	143 (6100)	36 (1200)	270 (9001)
TOTAL	674 (22467)	93 (3100)	260 (8667)	107 (3567)	984 (32800)
	1009 (33634)				1469 (48968)
ORTHOPHOSPHORUS					
LAKE MURDO CON. POINT	89 (2967)	5 (167)	14 (467)	12 (400)	89 (2967)
POINT	33 (1100)	35 (1167)	79 (2633)	18 (600)	64 (2134)
TOTAL	338 (11267)	40 (1334)	93 (3100)	30 (1000)	470 (15667)
	460 (15334)				623 (20768)
NITRATE-NITRITE NITROGEN					
LAKE MURDO CON. POINT	3987 (132900)	628 (20933)	941 (31367)	575 (19167)	3987 (132900)
POINT	1196 (39933)	193 (6433)	319 (10633)	89 (2967)	3342 (111400)
TOTAL	877 (29233)	821 (27366)	1260 (42000)	664 (22134)	1478 (49266)
	6062 (202166)				8807 (293566)
AMMONIA NITROGEN					
LAKE MURDO CON. POINT	265 (8833)	13 (433)	124 (4133)	32 (1067)	265 (8833)
POINT	70 (2333)	159 (5300)	322 (10733)	95 (3167)	239 (7966)
TOTAL	1008 (33600)	172 (5733)	446 (14866)	127 (4234)	1584 (52800)
	1343 (44766)				2088 (69599)
ORGANIC NITROGEN					
LAKE MURDO CON. POINT	3899 (129967)	29 (967)	304 (10133)	284 (9467)	3899 (129967)
POINT	374 (12467)	71 (2367)	125 (4167)	30 (1000)	991 (33034)
TOTAL	310 (10333)	100 (3334)	429 (14300)	314 (10467)	536 (17867)
	4543 (152767)				5426 (180868)
CHLORIDE					
LAKE MURDO CON. POINT	121109 (4036967)	13563 (452100)	106480 (3549333)	7469 (242300)	121109 (4036967)
POINT	25013 (83367)	5016 (167200)	10152 (338400)	2175 (72500)	152325 (5077500)
TOTAL	166934 (5631133)	18579 (619300)	116632 (3887733)	9644 (314800)	186277 (6209233)
	315056 (10501867)				459711 (15323700)
SILICA					
LAKE MURDO CON. POINT	15821 (527367)	1690 (56333)	2519 (83967)	1715 (57167)	15821 (527367)
POINT	2224 (74200)	157 (5233)	301 (10033)	68 (2267)	8150 (271667)
TOTAL	664 (22133)	1847 (61566)	2620 (90000)	1783 (59434)	1190 (39666)
	18711 (623700)				25161 (838700)

HASTIN LOADINGS IN METRIC TONS PER MONTH FOR DECEMBER, 1973
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	219 (7032)	791 (25516)	184 (5935)	88 (2839)	216 (7032)
NO. POINT	221 (7129)	170 (5348)	198 (6387)	38 (1226)	1284 (41419)
POINT	701 (22613)	901 (29064)	342 (12322)	126 (4065)	1087 (33774)
TOTAL	1140 (36770)				2549 (82225)
ORTHOPHOSPHORUS					
LAKE MURON	96 (2903)	56 (1806)	30 (968)	13 (419)	90 (2903)
NO. POINT	59 (1903)	55 (1774)	87 (2806)	18 (581)	158 (5096)
POINT	350 (11290)	111 (3580)	117 (3774)	31 (1000)	510 (16451)
TOTAL	499 (16096)				758 (24450)
NITRATE-NITRITE NITROGEN					
LAKE MURON	4031 (130032)	4472 (144258)	2443 (78806)	657 (21194)	4031 (130032)
NO. POINT	2434 (78605)	204 (6581)	330 (10645)	93 (3000)	10010 (322903)
POINT	906 (29226)	4676 (150839)	2773 (89451)	750 (24194)	1533 (49452)
TOTAL	7375 (237903)				15574 (502387)
AMMONIA NITROGEN					
LAKE MURON	268 (8485)	42 (1355)	189 (6097)	42 (1355)	260 (8485)
NO. POINT	139 (4484)	229 (7387)	364 (11742)	100 (3226)	412 (13291)
POINT	1045 (33710)	271 (8742)	553 (17839)	142 (4581)	1738 (56065)
TOTAL	1452 (46839)				2418 (78001)
ORGANIC NITROGEN					
LAKE MURON	3942 (127161)	550 (17742)	578 (18645)	360 (11613)	3942 (127161)
NO. POINT	676 (21613)	75 (2419)	129 (4161)	32 (1032)	2158 (69613)
POINT	320 (10323)	625 (20161)	707 (22806)	392 (12645)	556 (17935)
TOTAL	4932 (159097)				6656 (214709)
CHLORIDE					
LAKE MURON	122448 (3949935)	136074 (4389484)	7882 (250258)		122448 (3949935)
NO. POINT	44089 (122226)	10491 (338419)	2247 (72486)		221878 (7157355)
POINT	174564 (5631097)	146565 (4727903)	10129 (326742)		192485 (6209194)
TOTAL	341101 (11003258)				536811 (17316484)
SILICA					
LAKE MURON	15996 (516000)	9511 (306806)	4934 (159161)	1989 (64161)	15996 (516000)
NO. POINT	3528 (113806)	162 (5226)	311 (10032)	70 (2258)	19962 (643934)
POINT	646 (22129)	9673 (312032)	5245 (169193)	2059 (66419)	1229 (39645)
TOTAL	20210 (651935)				37187 (1199579)

WASTEWATER LOADINGS IN METRIC TONS PER MONTH FOR JANUARY, 1974
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	251 (8097)	1440 (46452)	545 (17581)	142 (4581)	251 (8097)
AG. POINT	535 (17258)	89 (2871)	179 (5774)	36 (1161)	2662 (85872)
POINT	511 (16464)	1529 (49323)	724 (23355)	178 (5742)	815 (26290)
TOTAL	1297 (41859)				3728 (120259)
ORINO PHOSPHORUS					
LAKE HURON	59 (1903)	193 (6226)	93 (3000)	22 (710)	59 (1903)
AG. POINT	112 (3613)	44 (1419)	81 (2613)	17 (548)	420 (13549)
POINT	253 (8226)	237 (7645)	174 (5613)	39 (1258)	397 (12806)
TOTAL	426 (13742)				876 (28258)
NITRATE-NITRITE NITROGEN					
LAKE HURON	4246 (136968)	9059 (292226)	3686 (118903)	975 (31452)	4246 (136968)
AG. POINT	4900 (160000)	207 (6677)	323 (10419)	90 (2903)	18680 (602581)
POINT	609 (20332)	9266 (298903)	4009 (129322)	1065 (34355)	1489 (48031)
TOTAL	10075 (325000)				24415 (787580)
AMMONIA NITROGEN					
LAKE HURON	280 (9032)	486 (15677)	387 (12484)	40 (1290)	280 (9032)
AG. POINT	296 (9548)	263 (8484)	362 (11677)	107 (3452)	1209 (38999)
POINT	1008 (32516)	749 (24161)	749 (24161)	147 (4742)	1740 (56129)
TOTAL	1584 (51096)				3229 (104160)
ORGANIC NITROGEN					
LAKE HURON	3643 (118806)	2015 (65000)	1106 (35677)	464 (15129)	3683 (118806)
AG. POINT	1416 (45742)	77 (2484)	129 (4161)	31 (1000)	5008 (161548)
POINT	307 (9903)	2092 (67484)	1235 (39838)	500 (16129)	544 (17548)
TOTAL	5466 (174451)				9235 (297902)
CHLORIDE					
LAKE HURON	101648 (3278968)	75184 (2425290)	110161 (3553581)	10666 (340065)	101648 (3278968)
AG. POINT	86427 (2787968)	5265 (169839)	10466 (337613)	2170 (70000)	282438 (9110904)
POINT	173678 (5602516)	60444 (2595124)	120627 (3891194)	12836 (414065)	191579 (6179968)
TOTAL	361753 (11469452)				575665 (18569640)
SILICA					
LAKE HURON	15010 (484194)	14977 (483129)	8913 (287516)	2541 (81968)	15010 (484194)
AG. POINT	6687 (215710)	165 (5323)	309 (9984)	68 (2144)	33118 (106823)
POINT	658 (21226)	15142 (484452)	9222 (297484)	2609 (84162)	1200 (38711)
TOTAL	22355 (721130)				49329 (1591228)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1974 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	228 (8143)	514 (18429)	144 (5286)	92 (3286)	228 (8143)
NO. POINT	252 (9060)	81 (2893)	157 (5607)	32 (1143)	1008 (36001)
POINT	456 (16357)	597 (21322)	305 (10893)	124 (4429)	728 (26000)
TOTAL	936 (33500)				1964 (70148)
ORTHO PHOSPHORUS					
LAKE MURON	54 (1929)	97 (3464)	28 (1000)	16 (571)	54 (1929)
NO. POINT	74 (266)	39 (1393)	65 (2321)	15 (536)	205 (7321)
POINT	228 (8143)	136 (4857)	93 (3321)	31 (1107)	347 (12393)
TOTAL	346 (12358)				606 (21643)
NITRATE-NITRIF NITROGEN					
LAKE MURON	3854 (137643)	5087 (181679)	1696 (60571)	744 (26571)	3854 (137643)
NO. POINT	2786 (99500)	167 (6679)	292 (10429)	81 (2893)	10113 (363321)
POINT	765 (2836)	5274 (188358)	1988 (71000)	825 (29464)	1345 (48037)
TOTAL	7425 (265179)				15512 (554001)
AMMONIA NITROGEN					
LAKE MURON	254 (9071)	234 (8429)	141 (5036)	25 (893)	254 (9071)
NO. POINT	157 (5607)	237 (8464)	300 (10714)	97 (3464)	559 (19465)
POINT	907 (32393)	473 (16893)	441 (15750)	122 (4357)	1541 (55035)
TOTAL	1318 (47071)				2354 (84071)
ORGANIC NITROGEN					
LAKE MURON	3342 (119357)	937 (33464)	431 (15393)	251 (8964)	3342 (119357)
NO. POINT	770 (27500)	69 (2464)	116 (4143)	27 (964)	2389 (85321)
POINT	277 (9893)	1006 (35928)	547 (19536)	278 (9928)	489 (17464)
TOTAL	4389 (156750)				6220 (222142)
CHLORIDE					
LAKE MURON	92242 (3294357)	49718 (1775643)	82136 (2933429)	8501 (303607)	92242 (3294357)
NO. POINT	57441 (2051464)	4755 (169821)	9453 (337607)	1961 (70036)	197796 (7064143)
POINT	156871 (5602536)	54073 (1905464)	91589 (3271036)	10462 (373643)	173040 (6180000)
TOTAL	306554 (10946357)				463078 (16538500)
SILICA					
LAKE MURON	13621 (486464)	9102 (325071)	3716 (132714)	1817 (64893)	13621 (486464)
NO. POINT	4214 (150500)	149 (5321)	279 (9964)	61 (2174)	1889 (673178)
POINT	595 (21256)	9251 (330392)	3995 (142678)	1878 (67072)	1084 (38714)
TOTAL	18430 (658214)				33554 (1198356)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH, 1974
(AVE DAILY LOADS IN KG/DAY)

	NET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	253 (8161)	910 (29355)	511 (16484)	407 (13129)	253 (8161)
POI. POINT	620 (20000)	93 (3000)	179 (5774)	36 (1161)	2448 (78968)
POI. POINT	511 (16484)	93 (3000)	179 (5774)	36 (1161)	819 (26419)
TOTAL	1384 (44655)	1003 (32355)	690 (22256)	443 (14290)	3520 (113548)
ORTHO PHOSPHORUS					
LAKE MURON	60 (1935)	166 (5355)	77 (2484)	43 (1387)	60 (1935)
POI. POINT	130 (4194)	44 (1419)	88 (2839)	18 (581)	416 (13420)
POI. POINT	256 (8258)	44 (1419)	88 (2839)	18 (581)	406 (13097)
TOTAL	446 (14387)	210 (6774)	165 (5323)	61 (1968)	882 (28452)
NITRATE-NITRITE NITROGEN					
LAKE MURON	4286 (138258)	8559 (276097)	3486 (125355)	1726 (55677)	4286 (138258)
POI. POINT	5515 (177403)	207 (6677)	523 (16419)	90 (2903)	19686 (635032)
POI. POINT	609 (20322)	8766 (282774)	4209 (135774)	1816 (58580)	1489 (48031)
TOTAL	10670 (344193)	8766 (282774)	4209 (135774)	1816 (58580)	25461 (821321)
AMMONIA NITROGEN					
LAKE MURON	282 (9097)	377 (12161)	421 (13581)	114 (3677)	282 (9097)
POI. POINT	328 (10581)	263 (8484)	376 (12129)	107 (3452)	1240 (40000)
POI. POINT	1016 (32774)	640 (20645)	797 (25710)	221 (7129)	1762 (56839)
TOTAL	1626 (52452)	640 (20645)	797 (25710)	221 (7129)	3284 (105936)
ORGANIC NITROGEN					
LAKE MURON	3718 (119935)	1530 (49355)	1189 (38355)	758 (24452)	3718 (119935)
POI. POINT	1644 (53032)	77 (2484)	129 (4161)	31 (1000)	5121 (165194)
POI. POINT	307 (9903)	1607 (51839)	1318 (42516)	789 (25452)	584 (17588)
TOTAL	5669 (182870)	1607 (51839)	1318 (42516)	789 (25452)	9363 (302677)
CHLORIDE					
LAKE MURON	102603 (3309774)	101363 (3269774)	112708 (3635742)	17390 (560968)	102603 (3309774)
POI. POINT	110154 (3553355)	5265 (169839)	10466 (337613)	2170 (70000)	341615 (11019839)
POI. POINT	173676 (5602510)	106628 (3439613)	123174 (3973355)	19560 (630968)	191579 (6179968)
TOTAL	386435 (12465645)	106628 (3439613)	123174 (3973355)	19560 (630968)	635797 (20509501)
SILICA					
LAKE MURON	15151 (488742)	14402 (467161)	9176 (296000)	4676 (150839)	15151 (488742)
POI. POINT	8041 (259387)	165 (5323)	309 (9968)	68 (2194)	36375 (1173307)
POI. POINT	654 (21226)	14647 (472484)	9485 (305968)	4744 (153033)	1200 (38711)
TOTAL	23650 (769355)	14647 (472484)	9485 (305968)	4744 (153033)	52726 (1700840)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1970 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM BASIN	EASTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO	248 (8267)				248 (8267)
ADJ. POINT	519 (16633)	474 (15933)	321 (10700)	341 (11367)	1459 (48333)
POINT	494 (16467)	89 (2967)	175 (5767)	34 (1133)	790 (26334)
TOTAL	1061 (35367)	567 (18900)	494 (16467)	375 (12500)	2497 (82334)
ORTHOPHOSPHORUS					
LAKE MURDO	59 (1967)				59 (1967)
ADJ. POINT	79 (2633)	91 (3033)	44 (1467)	36 (1200)	250 (8333)
POINT	247 (8233)	42 (1400)	77 (2567)	17 (567)	383 (12767)
TOTAL	385 (12833)	133 (4433)	121 (4034)	53 (1767)	692 (23067)
NITRATE-NITRITE-NITROGEN					
LAKE MURDO	4187 (139567)				4187 (139567)
ADJ. POINT	3331 (111033)	5232 (174400)	2279 (75967)	1567 (52233)	12409 (413633)
POINT	841 (28033)	200 (6667)	313 (10433)	86 (2867)	1440 (48000)
TOTAL	8359 (278633)	5432 (181067)	2592 (86400)	1653 (55100)	18036 (601200)
AMMONIA NITROGEN					
LAKE MURDO	276 (9200)				276 (9200)
ADJ. POINT	205 (6833)	229 (7633)	271 (9033)	117 (3900)	822 (27399)
POINT	977 (32567)	253 (8433)	358 (11933)	104 (3467)	1692 (56400)
TOTAL	1458 (48600)	482 (16066)	629 (20966)	221 (7367)	2790 (92999)
ORGANIC NITROGEN					
LAKE MURDO	3631 (121033)				3631 (121033)
ADJ. POINT	1034 (34467)	879 (29300)	754 (25133)	774 (25800)	3481 (114700)
POINT	297 (9900)	74 (2467)	125 (4167)	29 (967)	525 (17501)
TOTAL	4962 (165400)	953 (31767)	879 (29300)	803 (26767)	7597 (253234)
CHLORIDE					
LAKE MURDO	100217 (3340567)				100217 (3340567)
ADJ. POINT	69051 (2301700)	66915 (2230500)	113362 (3778733)	18516 (617200)	267644 (8928133)
POINT	168076 (5602533)	5095 (169833)	10128 (337600)	2101 (70033)	185400 (6179999)
TOTAL	337344 (11244800)	72010 (2400333)	123490 (4116333)	20617 (687233)	553461 (18448699)
SILICA					
LAKE MURDO	14798 (493267)				14798 (493267)
ADJ. POINT	5416 (180533)	9305 (310167)	5968 (198800)	4516 (150533)	25201 (840033)
POINT	637 (21233)	159 (5300)	299 (9967)	65 (2167)	1160 (38667)
TOTAL	20451 (695033)	9464 (315467)	6263 (208767)	4581 (152700)	41159 (1371967)

WASTEWATER LOADINGS IN METRIC TONS PER MONTH FOR MAY, 1974
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURON	264 (8516)			264 (8516)
W. POINT	373 (12032)			373 (12032)
E. POINT	511 (16444)			511 (16444)
TOTAL	1148 (37032)			1148 (37032)
ORTHOPHOSPHORUS				
LAKE MURON	62 (2000)			62 (2000)
W. POINT	45 (2742)			45 (2742)
E. POINT	256 (8256)			256 (8256)
TOTAL	403 (13000)			403 (13000)
NITRATE-NITRITE NITROGEN				
LAKE MURON	4466 (144065)			4466 (144065)
W. POINT	3790 (122254)			3790 (122254)
E. POINT	869 (28032)			869 (28032)
TOTAL	9125 (294351)			9125 (294351)
AMMONIA NITROGEN				
LAKE MURON	295 (9516)			295 (9516)
W. POINT	215 (6935)			215 (6935)
E. POINT	1011 (32615)			1011 (32615)
TOTAL	1521 (49066)			1521 (49066)
ORGANIC NITROGEN				
LAKE MURON	3873 (124935)			3873 (124935)
W. POINT	1072 (34581)			1072 (34581)
E. POINT	307 (9903)			307 (9903)
TOTAL	5252 (169419)			5252 (169419)
CHLORIDE				
LAKE MURON	106098 (3448323)			106098 (3448323)
W. POINT	64446 (2076903)			64446 (2076903)
E. POINT	173678 (562516)			173678 (562516)
TOTAL	345022 (11129742)			345022 (11129742)
SILICA				
LAKE MURON	15785 (509194)			15785 (509194)
W. POINT	5409 (170484)			5409 (170484)
E. POINT	658 (21226)			658 (21226)
TOTAL	21852 (700904)			21852 (700904)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR
(AVE DAILY LOADS IN KG/DAY)

JUNE , 1974

	DET/ST. CLP HASL	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOJ	266 (8867)	34 (1133)	14 (533)	37 (1233)	266 (8867)
NO. POINT	51 (1900)	43 (2767)	158 (5267)	32 (1067)	144 (4799)
POINT	477 (15900)	43 (2767)	174 (5800)	69 (2300)	750 (25001)
TOTAL	800 (26667)	117 (3900)	174 (5800)	69 (2300)	1160 (38667)
URTHO PHOSPHORUS					
LAKE MURDOJ	63 (2100)	9 (300)	6 (200)	8 (267)	63 (2100)
NO. POINT	16 (533)	34 (1300)	65 (2167)	16 (533)	39 (1300)
POINT	240 (8000)	48 (1600)	71 (2367)	24 (800)	360 (12000)
TOTAL	319 (10633)	48 (1600)	71 (2367)	24 (800)	462 (15400)
NITRATE-NITRATE NITROGEN					
LAKE MURDOJ	4496 (149867)	1107 (36900)	492 (16400)	328 (10933)	4496 (149867)
NO. POINT	513 (17100)	193 (6433)	313 (10433)	86 (2867)	2440 (81333)
POINT	840 (28000)	1300 (43333)	805 (26633)	414 (13800)	1432 (47733)
TOTAL	5849 (194967)	1300 (43333)	805 (26633)	414 (13800)	8368 (278933)
AMMONIA NITROGEN					
LAKE MURDOJ	296 (9867)	17 (567)	13 (433)	3 (100)	296 (9867)
NO. POINT	29 (967)	182 (6067)	293 (9767)	84 (2800)	62 (2067)
POINT	942 (32007)	194 (6634)	306 (10200)	87 (2900)	1521 (50701)
TOTAL	1287 (42901)	194 (6634)	306 (10200)	87 (2900)	1879 (62635)
ORGANIC NITROGEN					
LAKE MURDOJ	3899 (129967)	99 (3300)	127 (4233)	175 (5833)	3899 (129967)
NO. POINT	171 (5700)	73 (2433)	125 (4167)	29 (967)	572 (19066)
POINT	297 (9900)	172 (5733)	252 (8400)	204 (6800)	524 (17467)
TOTAL	4367 (145567)	172 (5733)	252 (8400)	204 (6800)	4995 (166500)
CHLORIDE					
LAKE MURDOJ	107606 (3586867)	18017 (600567)	45985 (1532833)	5062 (168733)	107606 (3586867)
NO. POINT	11763 (392100)	5095 (169833)	10128 (337600)	2101 (70033)	80827 (2698233)
POINT	165532 (5517133)	23112 (770400)	56113 (1870433)	7163 (238766)	182856 (6095199)
TOTAL	284901 (9406700)	23112 (770400)	56113 (1870433)	7163 (238766)	371289 (12376299)
SILICA					
LAKE MURDOJ	15890 (529667)	2660 (88933)	1399 (46633)	886 (29533)	15890 (529667)
NO. POINT	1045 (34833)	159 (5300)	299 (9967)	65 (2167)	5998 (199932)
POINT	637 (21233)	2827 (94233)	1698 (56600)	951 (31700)	1160 (38667)
TOTAL	17572 (585733)	2827 (94233)	1698 (56600)	951 (31700)	23048 (768266)

WASIN. LOADINGS IN METRIC TONS PER MONTH FOR JULY, 1974
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURRAY	223 (9129)	0 (0)	34 (1097)	30 (968)	203 (9129)
NOX POINT	46 (1484)		150 (4839)	33 (1065)	110 (3549)
POINT	490 (15806)	55 (1774)	104 (5936)	63 (2033)	728 (23484)
TOTAL	819 (26419)	55 (1774)			1121 (36162)
ORTHOPHOSPHORUS					
LAKE MURRAY	67 (2161)	1 (32)	3 (97)	4 (129)	67 (2161)
NOX POINT	13 (419)		62 (2000)	17 (548)	21 (677)
POINT	246 (7935)	26 (839)	65 (2097)	21 (677)	351 (11322)
TOTAL	326 (10515)	27 (871)			439 (14160)
NITRATE-NITRITE-NITROGEN					
LAKE MURRAY	4785 (154355)	84 (2710)	254 (8194)	99 (3194)	4785 (154355)
NOX POINT	274 (8968)	180 (5806)	321 (10355)	90 (2903)	715 (23066)
POINT	664 (28000)	264 (8516)	575 (18549)	189 (6097)	1459 (47064)
TOTAL	5931 (191323)				6959 (22445)
AMMONIA-NITROGEN					
LAKE MURRAY	315 (10161)	0 (0)	40 (1290)	4 (129)	315 (10161)
NOX POINT	21 (677)		280 (9032)	75 (2419)	65 (2096)
POINT	991 (31968)	145 (4677)	320 (10322)	79 (2548)	1491 (48046)
TOTAL	1327 (42806)	145 (4677)			1871 (60353)
ORGANIC NITROGEN					
LAKE MURRAY	4150 (133871)	16 (516)	99 (3194)	164 (5290)	4150 (133871)
NOX POINT	113 (3645)		129 (4161)	31 (1000)	392 (12645)
POINT	307 (9903)	61 (1968)	228 (7355)	195 (6290)	528 (17032)
TOTAL	4570 (147419)	77 (2484)			5070 (163546)
CHLORIDE					
LAKE MURRAY	114533 (3694613)	5357 (172806)	43231 (1394548)	3369 (108677)	114533 (3694613)
NOX POINT	4491 (144871)	5143 (165403)	10466 (337613)	2170 (70000)	5648 (1820902)
POINT	168992 (515155)	10500 (338709)	53697 (1732161)	5539 (178677)	186771 (6024871)
TOTAL	280016 (9240839)				357752 (11540386)
SILICA					
LAKE MURRAY	16912 (545548)	526 (16968)	957 (30871)	591 (19065)	16912 (545548)
NOX POINT	697 (22484)	160 (5161)	304 (9960)	64 (2194)	2771 (89388)
POINT	658 (21226)	686 (22129)	1266 (40839)	659 (21259)	1195 (38549)
TOTAL	14267 (589258)				20878 (673485)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1974
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	281 (9065)				281 (9065)
PO. POINT	34 (1097)	0 (0)	5 (161)	13 (419)	52 (1677)
P. POINT	491 (15839)	51 (1645)	158 (5097)	32 (1032)	732 (23613)
TOTAL	806 (26001)	51 (1645)	163 (5258)	45 (1451)	1065 (34355)
ORTHOPHOSPHORUS					
LAKE MURON	67 (2161)				67 (2161)
PO. POINT	9 (290)	2 (65)		3 (97)	16 (517)
P. POINT	246 (7935)	25 (806)	62 (2000)	17 (548)	350 (11289)
TOTAL	322 (10386)	27 (871)	64 (2065)	20 (645)	433 (13967)
NITRATE-NITRITE-NITROGEN					
LAKE MURON	4765 (153713)				4765 (153713)
PO. POINT	128 (4129)	24 (774)	208 (6710)	23 (742)	383 (12355)
P. POINT	468 (28000)	184 (5935)	323 (10419)	88 (2839)	1463 (47193)
TOTAL	5761 (185839)	208 (6709)	531 (17129)	111 (3581)	6611 (213258)
AMMONIA NITROGEN					
LAKE MURON	314 (10129)				314 (10129)
PO. POINT	16 (516)	0 (0)	6 (194)	1 (32)	23 (742)
P. POINT	990 (31935)	143 (4613)	286 (9290)	71 (2290)	1492 (48128)
TOTAL	1320 (42580)	143 (4613)	294 (9484)	72 (2322)	1829 (58999)
ORGANIC NITROGEN					
LAKE MURON	4133 (133323)				4133 (133323)
PO. POINT	93 (3000)	9 (290)	55 (1774)	124 (4000)	281 (9064)
P. POINT	307 (9903)	59 (1903)	124 (4161)	31 (1000)	526 (16967)
TOTAL	4533 (146226)	68 (2193)	184 (5935)	155 (5000)	4940 (159354)
CHLORIDE					
LAKE MURON	114056 (3679226)				114056 (3679226)
PO. POINT	3221 (103903)	5045 (162742)	29444 (962710)	2499 (80613)	40609 (1309968)
P. POINT	169959 (5482548)	5075 (163710)	10465 (337581)	2170 (70000)	187669 (603839)
TOTAL	287236 (9265677)	10120 (326452)	40309 (1300291)	4669 (150613)	342334 (11043033)
SILICA					
LAKE MURON	16842 (543290)				16842 (543290)
PO. POINT	545 (17581)	388 (12516)	677 (21839)	401 (12935)	2011 (64371)
P. POINT	658 (21226)	165 (5323)	309 (9968)	68 (2194)	1200 (38711)
TOTAL	18045 (582097)	553 (17839)	986 (31807)	469 (15129)	20053 (646872)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1974
(AVE DAILY LOADS IN KG/DAY)

	DE/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	267 (8900)	0 (0)	3 (100)	13 (433)	267 (8900)
NO. POINT	31 (1033)	48 (1600)	145 (4833)	32 (1067)	47 (1566)
POINT	472 (15733)	48 (1600)	148 (4933)	45 (1500)	697 (23233)
TOTAL	770 (25666)				1011 (33699)
ORTHOPHOSPHORUS					
LAKE MURUM	63 (2100)	1 (33)	2 (67)	2 (67)	63 (2100)
NO. POINT	8 (267)	24 (800)	58 (1933)	16 (533)	13 (434)
POINT	237 (7900)	25 (833)	60 (2000)	18 (600)	335 (11166)
TOTAL	308 (10267)				411 (13700)
NITRATE-NITRATE NITROGEN					
LAKE MURUM	4515 (150500)	5 (167)	195 (6500)	38 (1267)	4515 (150500)
NO. POINT	92 (3067)	169 (5633)	312 (10400)	86 (2867)	330 (11001)
POINT	834 (27800)	174 (5800)	507 (16900)	124 (4134)	1401 (46700)
TOTAL	5441 (181367)				6246 (208201)
AMMONIA NITROGEN					
LAKE MURUM	298 (9933)	0 (0)	10 (333)	1 (33)	298 (9933)
NO. POINT	14 (467)	133 (4433)	274 (9133)	70 (2333)	25 (833)
POINT	955 (31633)	133 (4433)	284 (9466)	71 (2366)	1432 (47732)
TOTAL	1267 (42233)				1755 (58498)
ORGANIC NITROGEN					
LAKE MURUM	3916 (130533)	4 (133)	38 (1267)	123 (4100)	3916 (130533)
NO. POINT	77 (2567)	56 (1867)	121 (4033)	24 (967)	242 (8067)
POINT	295 (9833)	60 (2000)	159 (5300)	152 (5067)	501 (16700)
TOTAL	4288 (142933)				4659 (155300)
CHLORINE					
LAKE MURUM	108068 (3602267)	3034 (101133)	36111 (1203700)	2511 (83700)	108068 (3602267)
NO. POINT	1937 (64567)	4896 (163200)	10126 (337533)	2101 (70033)	43593 (1453100)
POINT	164157 (5471900)	7930 (264333)	46237 (1541233)	4612 (153733)	161260 (6042666)
TOTAL	274162 (9138734)				332941 (11098033)
SILICA					
LAKE MURUM	15958 (531933)	321 (10700)	659 (21967)	452 (15067)	15958 (531933)
NO. POINT	434 (14467)	157 (5233)	299 (9967)	65 (2167)	1666 (62201)
POINT	637 (21253)	478 (15933)	958 (31934)	517 (17234)	1158 (38600)
TOTAL	17029 (567633)				14982 (632734)

WASIS LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1974 (AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURPHY	268 (8645)			268 (8645)
CO. POINT	57 (1838)			57 (1838)
PONT	709 (22871)			709 (22871)
TOTAL	1034 (33354)			1034 (33354)
ORTHU PHOSPHORUS				
LAKE MURPHY	64 (2065)			64 (2065)
CO. POINT	20 (645)			20 (645)
PONT	348 (11096)			348 (11096)
TOTAL	426 (13806)			426 (13806)
NITRATE-NITRITE NITROGEN				
LAKE MURPHY	4546 (146645)			4546 (146645)
CO. POINT	327 (10548)			327 (10548)
PONT	1411 (45516)			1411 (45516)
TOTAL	6284 (202709)			6284 (202709)
AMMONIA NITROGEN				
LAKE MURPHY	300 (9677)			300 (9677)
CO. POINT	35 (1128)			35 (1128)
PONT	1473 (47516)			1473 (47516)
TOTAL	1808 (58321)			1808 (58321)
ORGANIC NITROGEN				
LAKE MURPHY	3942 (127161)			3942 (127161)
CO. POINT	276 (8903)			276 (8903)
PONT	504 (16258)			504 (16258)
TOTAL	4722 (152322)			4722 (152322)
CHLORIDE				
LAKE MURPHY	108807 (3509903)			108807 (3509903)
CO. POINT	54798 (1767617)			54798 (1767617)
PONT	185435 (5981775)			185435 (5981775)
TOTAL	349040 (11259355)			349040 (11259355)
SILICA				
LAKE MURPHY	16067 (518290)			16067 (518290)
CO. POINT	1632 (59098)			1632 (59098)
PONT	1196 (38582)			1196 (38582)
TOTAL	19095 (615970)			19095 (615970)

BASEIN LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1974
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO	255 (8500)				255 (8500)
NO. POINT	56 (1867)	1 (33)	175 (5767)	53 (1767)	283 (9434)
POLIT	475 (15833)	60 (2000)	169 (5633)	34 (1133)	738 (24599)
TOTAL	786 (26200)	61 (2033)	342 (11400)	87 (2900)	1276 (42533)
ORTHO PHOSPHORUS					
LAKE MURDO	60 (2000)				60 (2000)
NO. POINT	19 (633)	4 (133)	18 (600)	6 (200)	47 (1566)
POLIT	259 (7967)	26 (867)	77 (2567)	17 (567)	359 (11960)
TOTAL	318 (10600)	30 (1000)	95 (3167)	23 (767)	466 (15534)
NITRATE-NITRITE NITROGEN					
LAKE MURDO	4322 (144067)				4322 (144067)
NO. POINT	458 (15267)	206 (6867)	1056 (35200)	315 (10500)	2035 (67834)
POLIT	840 (28000)	101 (6033)	313 (10433)	86 (2867)	1420 (47333)
TOTAL	5620 (187334)	307 (12900)	1369 (45633)	401 (13367)	7777 (259234)
AMMONIA NITROGEN					
LAKE MURDO	285 (9500)				285 (9500)
NO. POINT	52 (1067)	2 (67)	267 (8900)	39 (1300)	340 (11334)
POLIT	900 (32000)	150 (5000)	323 (10767)	76 (2600)	1511 (50367)
TOTAL	1277 (42567)	152 (5067)	590 (19667)	117 (3900)	2136 (71201)
ORGANIC NITROGEN					
LAKE MURDO	5744 (120933)				5744 (120933)
NO. POINT	145 (4833)	20 (667)	495 (16500)	336 (11267)	996 (33267)
POLIT	247 (9900)	64 (2267)	125 (4167)	29 (967)	519 (17301)
TOTAL	4190 (139666)	84 (2934)	620 (20667)	367 (12234)	5265 (175501)
CHLORIDE					
LAKE MURDO	103449 (3448300)				103449 (3448300)
NO. POINT	6543 (211333)	4222 (274067)	10030 (3364333)	5336 (177867)	120628 (4027600)
POLIT	166721 (557367)	5095 (169633)	10128 (337600)	2101 (70033)	184045 (6134833)
TOTAL	276510 (9217000)	13317 (443900)	111558 (3701933)	7437 (247900)	406322 (13610733)
SILICA					
LAKE MURDO	15276 (509200)				15276 (509200)
NO. POINT	950 (31667)	705 (23500)	5576 (119200)	1359 (45300)	6590 (219667)
POLIT	637 (21233)	159 (5300)	299 (9967)	65 (2167)	1160 (38667)
TOTAL	16464 (562100)	864 (28800)	5875 (129167)	1424 (47467)	23026 (767534)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR DECEMBER, 1974 (AVE DAILY LOADS IN KG/DAY)

	1E1/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO	258 (8323)	248 (7935)	305 (9439)	35 (1129)	258 (8323)
POW. POINT	68 (2194)	85 (2742)	179 (5774)	36 (1161)	654 (21097)
TOTAL	404 (15935)	331 (10677)	484 (15613)	71 (2290)	794 (25612)
ORTHOPHOSPHORUS					
LAKE MURDO	61 (1968)	31 (1000)	50 (1613)	4 (129)	61 (1968)
POW. POINT	18 (581)	43 (1387)	87 (2806)	17 (548)	103 (3323)
TOTAL	249 (8000)	74 (2387)	137 (4419)	21 (677)	395 (12741)
NITRATE-NITRITE-NITROGEN					
LAKE MURDO	4365 (140839)	3028 (97677)	3771 (121645)	202 (6516)	4366 (140839)
POW. POINT	750 (24323)	195 (6226)	323 (10419)	90 (2903)	7755 (250161)
TOTAL	5988 (193162)	3221 (103903)	4094 (132064)	292 (9419)	1474 (47548)
AMMONIA-NITROGEN					
LAKE MURDO	244 (9240)	6 (194)	278 (8968)	23 (742)	248 (9290)
POW. POINT	32 (1032)	191 (6161)	368 (11871)	75 (2419)	339 (10936)
TOTAL	995 (32097)	197 (6355)	646 (20839)	98 (3161)	1629 (52548)
ORGANIC-NITROGEN					
LAKE MURDO	3787 (122161)	230 (7419)	868 (28000)	297 (9581)	3787 (122161)
POW. POINT	199 (6419)	73 (2355)	129 (4161)	31 (1000)	1594 (51419)
TOTAL	4293 (138483)	303 (9774)	997 (32161)	328 (10581)	540 (17419)
CHLORIDE					
LAKE MURDO	104512 (3371355)	23591 (761000)	165084 (5325290)	4733 (152677)	104512 (3371355)
POW. POINT	6981 (229716)	5265 (169839)	10466 (337613)	2170 (70000)	202389 (6524677)
TOTAL	173678 (5602516)	28856 (930839)	175550 (5662903)	6903 (222677)	191579 (6179468)
SILICA					
LAKE MURDO	15432 (497806)	5915 (190806)	7390 (238387)	1305 (42097)	15432 (497806)
POW. POINT	1300 (41935)	165 (5323)	309 (9968)	68 (2194)	15910 (513225)
TOTAL	658 (21226)	6080 (196129)	7699 (248355)	1373 (44291)	1200 (38711)
	17390 (560967)				32542 (1049742)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JANUARY, 1975
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLK. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	167 (5387)	476 (15355)	404 (13032)	99 (3194)	167 (5387)
NO. POINT	287 (9258)	76 (2452)	170 (5484)	32 (1032)	1266 (40839)
POINT	525 (16935)	76 (2452)	574 (18516)	131 (4226)	803 (25903)
TOTAL	979 (31580)	552 (17807)			2236 (72129)
ORTHO PHOSPHORUS					
LAKE MURDOCK	94 (1419)	104 (3355)	65 (2097)	8 (258)	44 (1419)
NO. POINT	69 (2226)	38 (1226)	79 (2508)	16 (516)	246 (7936)
POINT	261 (8419)	142 (4581)	144 (4645)	24 (774)	394 (12709)
TOTAL	374 (12064)				684 (22064)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	3928 (126710)	5103 (164613)	3083 (99452)	546 (17613)	3928 (126710)
NO. POINT	3199 (103190)	205 (6613)	295 (9516)	90 (2903)	11931 (384872)
POINT	439 (30290)	5308 (171226)	3378 (108968)	636 (20516)	1529 (49322)
TOTAL	8066 (260194)				17368 (560904)
AMMONIA NITROGEN					
LAKE MURDOCK	175 (5645)	183 (5903)	351 (11323)	37 (1194)	175 (5645)
NO. POINT	165 (5323)	258 (8323)	401 (12935)	87 (2806)	736 (23743)
POINT	1028 (35097)	441 (14226)	752 (24258)	124 (4000)	1834 (59161)
TOTAL	1428 (46665)				2745 (88549)
ORGANIC NITROGEN					
LAKE MURDOCK	2742 (88452)	759 (24484)	962 (31032)	362 (11677)	2742 (88452)
NO. POINT	456 (27613)	77 (2484)	127 (4097)	31 (1000)	2939 (94806)
POINT	331 (10677)	836 (26968)	1684 (55129)	393 (12677)	566 (16258)
TOTAL	3929 (126742)				624 (201516)
CHLORIDE					
LAKE MURDOCK	49659 (2842226)	47954 (1546903)	119345 (3849839)	7515 (242419)	89659 (2892226)
NO. POINT	46138 (1483523)	5274 (170124)	10354 (33000)	2170 (70000)	220952 (7127484)
POINT	175364 (5655903)	53228 (1717032)	124699 (4183839)	9685 (312419)	193162 (6231032)
TOTAL	311161 (10037452)				503773 (16250742)
SILICA					
LAKE MURDOCK	16940 (547742)	8834 (284968)	7660 (247097)	2087 (67323)	16940 (547742)
NO. POINT	4272 (137806)	165 (5323)	305 (9639)	68 (2194)	22653 (737194)
POINT	711 (22935)	8949 (290291)	7465 (250936)	2155 (69517)	1249 (40291)
TOTAL	21963 (708443)				41082 (1325227)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1975
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	148 (5286)	736 (26286)	548 (19571)	129 (4607)	148 (5286)
POINTE A LA PUE	312 (11143)	69 (2464)	153 (5464)	28 (1000)	1725 (61607)
TOTAL	460 (16229)	805 (28750)	701 (25035)	157 (5607)	724 (25857)
UNITED PHOSPHORUS					
LAKE MURPHY	39 (1393)	172 (6143)	74 (2643)	11 (393)	39 (1393)
POINTE A LA PUE	65 (2321)	34 (1214)	71 (2536)	14 (500)	322 (11500)
TOTAL	235 (8503)	206 (7357)	145 (5179)	25 (893)	350 (12643)
NITRATE-NITRIF NITROGEN					
LAKE MURPHY	3482 (124357)	4922 (175786)	3181 (113607)	639 (22821)	3482 (124357)
POINTE A LA PUE	2405 (85750)	185 (6607)	266 (9500)	81 (2893)	11647 (415964)
TOTAL	7235 (258593)	5107 (182393)	3447 (123107)	720 (25714)	1380 (49286)
AMMONIA NITROGEN					
LAKE MURPHY	155 (5536)	224 (8179)	433 (15464)	48 (1714)	155 (5536)
POINTE A LA PUE	169 (6036)	233 (8321)	364 (13000)	82 (2929)	879 (31393)
TOTAL	1305 (46696)	462 (16500)	797 (28464)	130 (4643)	1660 (59286)
ORGANIC NITROGEN					
LAKE MURPHY	2430 (86786)	1213 (43321)	1083 (38679)	433 (15464)	2430 (86786)
POINTE A LA PUE	818 (29214)	69 (2464)	115 (4107)	27 (964)	3547 (126678)
TOTAL	3547 (126678)	1282 (45785)	1198 (42786)	460 (16428)	510 (18214)
CHLORIDE					
LAKE MURPHY	79469 (2838179)	55137 (1969179)	111667 (3988107)	8664 (309424)	79469 (2838179)
POINTE A LA PUE	48061 (1716964)	4763 (170107)	9352 (334000)	1961 (70036)	223529 (7983179)
TOTAL	158394 (5656929)	59900 (2139286)	121019 (4322107)	10625 (379465)	174470 (6231072)
SILICA					
LAKE MURPHY	15050 (537500)	10230 (365357)	8354 (298357)	2309 (82464)	15050 (537500)
POINTE A LA PUE	3998 (142786)	149 (5321)	275 (9821)	61 (2179)	24091 (868964)
TOTAL	19691 (703250)	10379 (370678)	8629 (306178)	2370 (84643)	1128 (40285)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH, 1975
(AVE DAILY LOADS IN KG/DAY)

	DEI/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURKIN	164 (5290)				164 (5290)
RUN POINT	507 (16355)	247 (7668)	355 (11452)	251 (8097)	1360 (43872)
POINT	529 (17065)	77 (2484)	170 (5484)	32 (1032)	800 (26065)
TOTAL	1200 (38710)	324 (10452)	525 (16936)	283 (9129)	2332 (75227)
ORTHO PHOSPHORUS					
LAKE MURKIN	44 (1419)				44 (1419)
RUN POINT	110 (3548)	80 (2581)	65 (2097)	33 (1065)	288 (9291)
POINT	203 (6484)	38 (1226)	83 (2677)	16 (516)	400 (12903)
TOTAL	417 (13451)	118 (3807)	148 (4774)	49 (1581)	732 (23613)
NITRATE-NITRILE NITROGEN					
LAKE MURKIN	3873 (124935)				3873 (124935)
RUN POINT	4908 (158323)	4642 (149742)	3042 (96129)	1461 (47129)	14053 (453323)
POINT	939 (30290)	205 (6613)	205 (9516)	90 (2903)	1529 (49322)
TOTAL	9720 (313548)	4847 (156355)	3337 (107645)	1551 (50032)	19455 (627580)
AMMONIA NITROGEN					
LAKE MURKIN	173 (5581)				173 (5581)
RUN POINT	284 (9161)	163 (5258)	358 (11548)	81 (2613)	886 (28580)
POINT	1091 (35194)	253 (8161)	416 (13419)	107 (3452)	1867 (60226)
TOTAL	1548 (49936)	416 (13419)	774 (24967)	188 (6065)	2926 (94387)
ORGANIC NITROGEN					
LAKE MURKIN	2703 (87194)				2703 (87194)
RUN POINT	1307 (42161)	556 (17935)	1015 (32742)	555 (17903)	3433 (110741)
POINT	331 (10677)	77 (2484)	127 (4097)	31 (1000)	566 (18258)
TOTAL	4341 (140032)	633 (20419)	1142 (36839)	586 (18903)	6702 (216193)
CHLORIDE					
LAKE MURKIN	88403 (2851710)				88403 (2851710)
RUN POINT	54173 (1747516)	47836 (1543097)	130415 (4206935)	16942 (546516)	249366 (8044068)
POINT	175364 (5656903)	5274 (170124)	10354 (334000)	2170 (70000)	193162 (6231032)
TOTAL	317940 (10256124)	53110 (1713226)	140769 (4540935)	19112 (616516)	530931 (17126806)
SILICA					
LAKE MURKIN	16742 (540045)				16742 (540045)
RUN POINT	6312 (203613)	8525 (275000)	7762 (250387)	4051 (130677)	26650 (859677)
POINT	711 (22935)	165 (5323)	305 (9839)	68 (2194)	1249 (40291)
TOTAL	23765 (766613)	8690 (280323)	8067 (260226)	4119 (132871)	44641 (1440033)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1975
(AVE DAILY LOADS IN KG/DAY)

	DE/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	163 (5433)	180 (6000)	49 (1633)	421 (14033)	163 (5433)
DOWN POINT	469 (15033)	76 (2533)	155 (5167)	30 (1000)	1119 (37299)
POINT	511 (17033)	256 (8533)	204 (6800)	451 (15033)	1772 (57733)
TOTAL	1103 (34099)	256 (8533)	204 (6800)	451 (15033)	2054 (68465)
ORTHO PHOSPHORUS					
LAKE MURDOCK	44 (1467)	60 (2000)	14 (467)	45 (1500)	44 (1467)
DOWN POINT	104 (3467)	37 (1233)	61 (2033)	15 (500)	223 (7434)
POINT	256 (8533)	97 (3233)	75 (2500)	60 (2000)	369 (12299)
TOTAL	404 (13467)	97 (3233)	75 (2500)	60 (2000)	636 (21200)
NITRATE-NITRILE NITROGEN					
LAKE MURDOCK	3855 (128500)	3498 (116600)	780 (26000)	1674 (55800)	3855 (128500)
DOWN POINT	4868 (162267)	198 (6600)	285 (9500)	86 (2867)	10820 (360667)
POINT	903 (30267)	3696 (123200)	1065 (35500)	1760 (58667)	1477 (49234)
TOTAL	9631 (321034)	3696 (123200)	1065 (35500)	1760 (58667)	16152 (538601)
AMMONIA NITROGEN					
LAKE MURDOCK	172 (5733)	128 (4267)	70 (2333)	102 (3400)	172 (5733)
DOWN POINT	246 (8233)	242 (8067)	322 (10733)	104 (3467)	586 (19533)
POINT	1062 (35400)	370 (12334)	392 (13066)	206 (6867)	1730 (57667)
TOTAL	1520 (50666)	370 (12334)	392 (13066)	206 (6867)	2408 (82933)
ORGANIC NITROGEN					
LAKE MURDOCK	2690 (89667)	463 (15433)	243 (8100)	653 (21767)	2690 (89667)
DOWN POINT	1339 (44633)	74 (2467)	123 (4100)	29 (967)	2698 (89933)
POINT	321 (10700)	537 (17900)	366 (12200)	682 (22734)	547 (18234)
TOTAL	4350 (145000)	537 (17900)	366 (12200)	682 (22734)	5935 (197834)
CHLORIDE					
LAKE MURDOCK	87984 (2932800)	41934 (1397900)	89871 (2995700)	20207 (673567)	87984 (2932800)
DOWN POINT	70605 (2355500)	5104 (170133)	10019 (333967)	2101 (70033)	222677 (7422567)
POINT	169708 (5656933)	47036 (1567933)	99890 (3329667)	22308 (743600)	186932 (6231066)
TOTAL	328357 (10945233)	47036 (1567933)	99890 (3329667)	22308 (743600)	497593 (16586433)
SILICA					
LAKE MURDOCK	16662 (555400)	6875 (229167)	1972 (65733)	4426 (147533)	16662 (555400)
DOWN POINT	7137 (237900)	154 (5300)	295 (9833)	65 (2167)	20410 (680333)
POINT	688 (22933)	7034 (234467)	2267 (75566)	4491 (149700)	1207 (40233)
TOTAL	24487 (816233)	7034 (234467)	2267 (75566)	4491 (149700)	38279 (1275966)

WATER LOADINGS IN METRIC TONS PER MONTH FOR MAY, 1975
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	176 (5677)	397 (12806)	65 (2097)	49 (1581)	176 (5677)
AD. POINT	68 (2194)	75 (2419)	170 (5484)	32 (1032)	579 (18678)
POINT	515 (16613)	472 (15225)	235 (7581)	81 (2613)	792 (25548)
TOTAL	759 (24484)				1547 (49903)
ORTHO PHOSPHORUS					
LAKE MURUM	47 (1516)	68 (2194)	17 (548)	10 (323)	47 (1516)
AD. POINT	21 (677)	38 (1226)	69 (2226)	15 (484)	116 (3742)
POINT	259 (8355)	106 (3420)	86 (2774)	25 (807)	381 (12291)
TOTAL	327 (10548)				544 (17549)
NITRATE-NITRITE NITROGEN					
LAKE MURUM	4149 (133839)	4792 (154581)	994 (32065)	444 (14323)	4149 (133839)
AD. POINT	817 (26355)	201 (6484)	295 (9516)	90 (2903)	7047 (227324)
POINT	939 (30290)	4993 (161065)	1289 (41581)	534 (17226)	1525 (49193)
TOTAL	5905 (190444)				12721 (410356)
AMMONIA NITROGEN					
LAKE MURUM	185 (5968)	24 (774)	38 (1226)	26 (834)	185 (5968)
AD. POINT	36 (1161)	219 (7065)	349 (11258)	91 (2935)	124 (4000)
POINT	1082 (34903)	243 (7839)	387 (12484)	117 (3774)	1741 (56161)
TOTAL	1353 (42932)				2050 (66129)
ORGANIC NITROGEN					
LAKE MURUM	2495 (93387)	386 (12452)	258 (8323)	272 (8774)	2495 (93387)
AD. POINT	260 (8387)	76 (2452)	127 (4097)	31 (1000)	1176 (37936)
POINT	331 (10677)	462 (14904)	395 (12420)	503 (9774)	565 (18226)
TOTAL	3486 (112451)				4636 (149549)
CHLORIDE					
LAKE MURUM	94687 (3054419)	35078 (1131546)	11272 (3637806)	6294 (203194)	94687 (3054419)
AD. POINT	22264 (718194)	5274 (170129)	10354 (334000)	2170 (70000)	176413 (5690742)
POINT	175364 (5656903)	40352 (1301677)	125126 (3971606)	8469 (273194)	193162 (6231032)
TOTAL	292315 (9429516)				464262 (14976193)
SILICA					
LAKE MURUM	17932 (578452)	9349 (301581)	2491 (86806)	1329 (42871)	17932 (578452)
AD. POINT	1632 (52645)	165 (5323)	305 (9839)	68 (2194)	15001 (483903)
POINT	711 (22935)	9514 (306904)	2946 (96645)	1397 (45065)	1249 (40291)
TOTAL	20275 (651032)				34182 (1102646)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JUNE, 1975
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN			CENTRAL BASIN			EASTERN BASIN			TOTAL
TOTAL PHOSPHORUS										
LAKE MURUM	172 (5733)									172 (5733)
POW. POINT	79 (2635)									79 (2635)
POINT	500 (16667)	374 (12467)		119 (3967)			83 (2767)			655 (21834)
TOTAL	751 (25045)	72 (2400)		162 (5400)			30 (1000)			764 (25467)
		446 (14867)		281 (9367)			113 (3767)			1591 (53034)
URINE PHOSPHORUS										
LAKE MURUM	46 (1533)									46 (1533)
POW. POINT	21 (706)									21 (706)
POINT	251 (8367)	62 (2067)		15 (500)			7 (233)			105 (3500)
TOTAL	318 (10600)	36 (1200)		73 (2433)			15 (500)			375 (12500)
		98 (3267)		88 (2933)			22 (733)			526 (17533)
NITRATE-NITRITE NITROGEN										
LAKE MURUM	4050 (135000)									4050 (135000)
POW. POINT	955 (31833)									955 (31833)
POINT	906 (30267)	4399 (146633)		1016 (33867)			443 (14767)			6813 (227100)
TOTAL	5013 (167100)	185 (6167)		285 (9500)			86 (2867)			1464 (48801)
		4584 (152800)		1301 (43367)			529 (17634)			12327 (410901)
AMMONIA NITROGEN										
LAKE MURUM	181 (6033)									181 (6033)
POW. POINT	42 (1406)									42 (1406)
POINT	1649 (54967)	8 (267)		146 (4867)			35 (1167)			231 (7701)
TOTAL	1272 (42400)	216 (7200)		347 (11567)			80 (2667)			1692 (56401)
		224 (7467)		493 (16434)			115 (3834)			2104 (70135)
ORGANIC NITROGEN										
LAKE MURUM	2827 (94233)									2827 (94233)
POW. POINT	291 (9700)									291 (9700)
POINT	321 (10700)	347 (11567)		380 (12667)			312 (10400)			1330 (44334)
TOTAL	3439 (114633)	71 (2367)		123 (4100)			29 (967)			544 (18134)
		418 (13934)		503 (16767)			341 (11367)			4701 (156701)
CHLORIDE										
LAKE MURUM	92444 (3081467)									92444 (3081467)
POW. POINT	18756 (625200)									18756 (625200)
POINT	169708 (5656933)	29626 (987533)		103713 (3457100)			6682 (222733)			158777 (5292566)
TOTAL	280908 (9365600)	5104 (170133)		10019 (333967)			2101 (70033)			166932 (6231066)
		34730 (1157666)		113732 (3791067)			8783 (292766)			438153 (14605099)
SILICA										
LAKE MURUM	17507 (583567)									17507 (583567)
POW. POINT	1735 (57833)									1735 (57833)
POINT	648 (22433)	4662 (288733)		3078 (102600)			1876 (62533)			15351 (511699)
TOTAL	19930 (664333)	159 (5300)		295 (9833)			65 (2167)			1207 (40233)
		4821 (294033)		3373 (112433)			1941 (64700)			34065 (1135499)

BASIN LOADINGS IN MEIMIC TONS PER MONTH FOR JULY, 1975
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLIP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	181 (5839)	115 (3710)	5 (161)	14 (452)	181 (5839)
NO. POINT	39 (1258)	71 (2240)	134 (4123)	29 (935)	173 (5581)
POINT	508 (16387)	186 (6000)	139 (4484)	43 (1387)	742 (23935)
TOTAL	728 (23484)				1096 (35355)
ORTHOPHOSPHORUS					
LAKE MURON	48 (1548)	6 (194)	2 (65)	3 (97)	48 (1548)
NO. POINT	11 (355)	36 (1161)	55 (1774)	15 (484)	22 (711)
POINT	255 (8226)	42 (1355)	57 (1839)	18 (581)	361 (11645)
TOTAL	314 (10129)				431 (13908)
NITRATE-NITRILE NITROGEN					
LAKE MURON	4259 (137387)	934 (30129)	137 (4419)	65 (2097)	4259 (137387)
NO. POINT	200 (6452)	184 (5935)	295 (9516)	90 (2903)	1336 (43097)
POINT	937 (30226)	1118 (36064)	432 (13935)	155 (5000)	1506 (48580)
TOTAL	5396 (174065)				7101 (229064)
AMMONIA NITROGEN					
LAKE MURON	190 (6129)	0 (0)	9 (290)	1 (32)	190 (6129)
NO. POINT	19 (613)	166 (5355)	291 (9387)	75 (2419)	29 (935)
POINT	1075 (34677)	166 (5355)	300 (9677)	76 (2451)	1607 (51838)
TOTAL	1284 (41419)				1826 (58902)
ORGANIC NITROGEN					
LAKE MURON	2972 (95871)	71 (2290)	37 (1194)	124 (4000)	2972 (95871)
NO. POINT	107 (3452)	70 (2254)	118 (3806)	31 (1000)	339 (10936)
POINT	331 (10677)	181 (4548)	155 (5000)	155 (5000)	550 (17741)
TOTAL	3410 (110008)				3861 (124548)
CHLORIDE					
LAKE MURON	97201 (3135516)	10711 (345516)	34069 (1099000)	2771 (89387)	97201 (3135516)
NO. POINT	4249 (137065)	5274 (170124)	10354 (334000)	2170 (70000)	51800 (1670968)
POINT	171376 (5528323)	15985 (515645)	44423 (1433000)	4441 (159387)	189176 (6102452)
TOTAL	272826 (8800904)				338177 (10908936)
SILICA					
LAKE MURON	18408 (593806)	2252 (72645)	520 (16774)	529 (17065)	18408 (593806)
NO. POINT	601 (19387)	165 (5323)	305 (9839)	88 (2194)	3902 (125871)
POINT	711 (22935)	2417 (77968)	625 (26613)	597 (19259)	1249 (40291)
TOTAL	19720 (636126)				23559 (759868)

WATER LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1975
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURPHY	179 (5774)			179 (5774)
DOWN POINT	61 (1964)	44 (1419)	46 (1484)	240 (7742)
POINT	518 (16710)	148 (4774)	29 (935)	767 (24742)
TOTAL	758 (24052)	192 (6193)	75 (2419)	1186 (38258)
ORTHO PHOSPHORUS				
LAKE MURPHY	47 (1516)			47 (1516)
DOWN POINT	17 (544)	11 (355)	9 (290)	47 (1516)
POINT	257 (8200)	60 (1935)	15 (484)	369 (11903)
TOTAL	321 (10350)	71 (2290)	24 (774)	463 (14935)
NITRATE-NITRITE-NITROGEN				
LAKE MURPHY	4222 (136194)			4222 (136194)
DOWN POINT	563 (18161)	618 (19335)	286 (9226)	2852 (91999)
POINT	937 (30226)	295 (9516)	90 (2903)	1512 (48774)
TOTAL	5722 (184581)	913 (29451)	376 (12129)	6586 (276967)
AMMONIA NITROGEN				
LAKE MURPHY	184 (6065)			184 (6065)
DOWN POINT	33 (1065)	59 (1903)	2 (65)	98 (3162)
POINT	1081 (34871)	301 (9710)	87 (2806)	1637 (52806)
TOTAL	1302 (42001)	360 (11613)	89 (2871)	1923 (62033)
ORGANIC NITROGEN				
LAKE MURPHY	2947 (95065)			2947 (95065)
DOWN POINT	234 (7548)	164 (5290)	181 (5834)	683 (22032)
POINT	331 (10677)	127 (4097)	31 (1000)	565 (18226)
TOTAL	3512 (113290)	291 (9387)	212 (6839)	4195 (135323)
CHLORIDE				
LAKE MURPHY	96363 (3108484)			96363 (3108484)
DOWN POINT	14417 (465065)	44647 (1440226)	5493 (177194)	78929 (2546098)
POINT	175364 (5656903)	10354 (334000)	2170 (70000)	193162 (6231032)
TOTAL	286144 (9230452)	55001 (1774226)	7663 (247194)	368454 (11885614)
SILICA				
LAKE MURPHY	18249 (58677)			18249 (58677)
DOWN POINT	1357 (43774)	1423 (45903)	923 (29774)	6547 (211193)
POINT	711 (22435)	305 (9839)	68 (2194)	1249 (40291)
TOTAL	20317 (655386)	1728 (55742)	991 (31468)	26045 (840161)

BASIN LOADINGS IN METRIC TONS PER A-DAY FOR SEPTEMBER, 1975
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	171 (5700)	138 (4600)	132 (4400)	33 (1100)	171 (5700)
MO. POINT	133 (4433)	75 (2500)	162 (5400)	28 (933)	436 (14533)
POINT	506 (16867)	213 (7100)	294 (9800)	61 (2033)	771 (25700)
TOTAL	810 (27060)				1378 (45933)
ORTHO PHOSPHORUS					
LAKE MURDOCK	45 (1500)	28 (933)	25 (833)	7 (233)	45 (1500)
MO. POINT	55 (1867)	37 (1233)	72 (2400)	14 (467)	95 (3166)
POINT	253 (8433)	65 (2166)	97 (3233)	21 (700)	376 (12533)
TOTAL	353 (11800)				516 (17199)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	4033 (134433)	2035 (67833)	1399 (46633)	263 (8767)	4033 (134433)
MO. POINT	1673 (55767)	198 (6600)	285 (9500)	86 (2867)	5370 (179000)
POINT	907 (30233)	2233 (74433)	1684 (56133)	349 (11634)	1476 (49200)
TOTAL	6613 (220433)				10879 (362633)
AMMONIA NITROGEN					
LAKE MURDOCK	180 (6000)	41 (1367)	154 (5133)	5 (167)	180 (6000)
MO. POINT	79 (2633)	191 (6367)	345 (11500)	76 (2600)	279 (9300)
POINT	1052 (35067)	232 (7734)	499 (16633)	83 (2767)	1666 (55534)
TOTAL	1311 (43700)				2125 (70634)
ORGANIC NITROGEN					
LAKE MURDOCK	2814 (93800)	195 (6500)	420 (14000)	177 (5900)	2814 (93800)
MO. POINT	481 (16033)	74 (2467)	123 (4100)	29 (967)	1273 (42433)
POINT	321 (10700)	269 (8967)	543 (18100)	206 (6867)	547 (18234)
TOTAL	3616 (120533)				4634 (154467)
CHLORIDE					
LAKE MURDOCK	92038 (3067933)	28419 (947300)	99397 (3313233)	4466 (148867)	92038 (3067933)
MO. POINT	39258 (1309433)	5104 (170133)	10019 (333967)	210 (70033)	171580 (5719333)
POINT	189708 (5656933)	33523 (1117433)	109416 (3647200)	6567 (218900)	186932 (6231066)
TOTAL	511044 (16834799)				450550 (15018332)
SILICA					
LAKE MURDOCK	17430 (581000)	4552 (151733)	3382 (112733)	809 (26967)	17430 (581000)
MO. POINT	2729 (90967)	159 (5300)	295 (9833)	65 (2167)	11472 (382400)
POINT	668 (22933)	4711 (157033)	3677 (122566)	874 (29134)	1207 (40233)
TOTAL	20687 (694900)				30109 (1003633)

BASIN LOADINGS IN METRIC TONS A MONTH FOR OCTOBER, 1975
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO	171 (5516)	100 (3226)	22 (710)	23 (742)	171 (5516)
CON. POINT	52 (1677)	74 (2347)	149 (4806)	30 (968)	197 (6355)
POINT	509 (16419)	174 (5613)	171 (5516)	53 (1710)	762 (24540)
TOTAL	732 (23612)				1130 (36451)
ORTHO PHOSPHORUS					
LAKE MURDO	40 (1484)	6 (194)	7 (226)	4 (129)	46 (1884)
CON. POINT	17 (588)	34 (1097)	61 (1968)	15 (484)	34 (1097)
POINT	256 (8258)	41 (1291)	68 (2194)	19 (613)	366 (11807)
TOTAL	319 (10291)				446 (14388)
NITRATE-NITRITE NITROGEN					
LAKE MURDO	4038 (130258)	690 (22258)	488 (15742)	125 (4032)	4038 (130258)
CON. POINT	343 (12677)	192 (6194)	295 (9516)	90 (2903)	1696 (54709)
POINT	937 (30226)	882 (28452)	783 (25258)	215 (6935)	1514 (48839)
TOTAL	5308 (173161)				7248 (233806)
AMMONIA NITROGEN					
LAKE MURDO	180 (5806)	1 (32)	42 (1355)	3 (97)	180 (5806)
CON. POINT	29 (935)	167 (5387)	314 (10129)	75 (2419)	75 (2419)
POINT	1076 (34711)	168 (5419)	356 (11484)	78 (2516)	1632 (52645)
TOTAL	1285 (41451)				1887 (60870)
ORGANIC NITROGEN					
LAKE MURDO	2819 (90935)	64 (2085)	120 (3871)	213 (6871)	2819 (90935)
CON. POINT	136 (4457)	73 (2355)	127 (4097)	31 (1000)	535 (17259)
POINT	331 (10877)	137 (4420)	247 (7968)	244 (7871)	562 (18129)
TOTAL	3288 (108064)				3916 (126323)
CHLORIDE					
LAKE MURDO	92174 (2973355)	12024 (398000)	91334 (2946258)	3800 (122581)	92174 (2973355)
CON. POINT	6421 (207124)	5274 (170129)	10354 (334000)	2170 (70000)	113583 (3683468)
POINT	171229 (5523510)	17302 (558129)	101688 (3280258)	5970 (192581)	189627 (607645)
TOTAL	269824 (8704000)				394784 (12734968)
SILICA					
LAKE MURDO	17456 (563097)	1823 (58806)	1374 (44323)	706 (22774)	17456 (563097)
CON. POINT	840 (27697)	165 (5323)	305 (9839)	68 (2194)	10743 (353000)
POINT	711 (22935)	1988 (64124)	1679 (54162)	774 (24966)	1249 (40291)
TOTAL	19007 (613129)				23448 (756388)

HAZAR. LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1975
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	163 (5433)				163 (5433)
NO. POINT	57 (1900)	18 (600)	21 (700)	36 (1200)	132 (4400)
POINT	496 (16533)	71 (2367)	139 (4633)	29 (967)	735 (24500)
TOTAL	716 (23866)	89 (2967)	160 (5333)	65 (2167)	1030 (34333)
ORTHOPHOSPHORUS					
LAKE HURON	44 (1467)				44 (1467)
NO. POINT	17 (567)	5 (167)	9 (300)	7 (233)	38 (1267)
POINT	250 (8333)	34 (1133)	56 (1867)	14 (467)	354 (11800)
TOTAL	311 (10367)	39 (1300)	65 (2167)	21 (700)	436 (14534)
NITRATE-NITRILE NITRANGE					
LAKE HURON	3455 (128500)				3455 (128500)
NO. POINT	564 (18400)	651 (21700)	360 (12000)	327 (10900)	1902 (63400)
POINT	907 (30233)	190 (6333)	285 (9500)	86 (2867)	1468 (48933)
TOTAL	5326 (177533)	841 (28033)	645 (21500)	413 (13767)	7225 (240833)
AMMONIA NITRATES					
LAKE HURON	172 (5733)				172 (5733)
NO. POINT	29 (967)	4 (133)	44 (1467)	4 (133)	81 (2700)
POINT	1044 (34400)	168 (5600)	297 (9900)	84 (2800)	1593 (53100)
TOTAL	1245 (41500)	172 (5733)	341 (11367)	88 (2933)	1846 (61533)
ORGANIC NITROGEN					
LAKE HURON	2690 (89667)				2690 (89667)
NO. POINT	184 (6300)	56 (1867)	112 (3733)	182 (6067)	539 (17967)
POINT	321 (10700)	72 (2400)	118 (3933)	29 (967)	540 (18000)
TOTAL	3200 (106667)	128 (4267)	230 (7666)	211 (7034)	3769 (125634)
CHLORIDE					
LAKE HURON	87904 (2932800)				87904 (2932800)
NO. POINT	11301 (376700)	13713 (457100)	86484 (2882800)	5112 (170400)	116610 (3887000)
POINT	169708 (5654433)	5104 (170133)	10019 (333967)	2101 (70033)	186932 (6231066)
TOTAL	268913 (8966433)	18817 (627233)	96503 (3216767)	7213 (240433)	391526 (13050866)
SILICA					
LAKE HURON	16662 (555400)				16662 (555400)
NO. POINT	1166 (38933)	1694 (56467)	1125 (37500)	913 (30433)	4900 (163333)
POINT	688 (22933)	159 (5300)	295 (9833)	65 (2167)	1207 (40233)
TOTAL	18514 (617266)	1853 (61767)	1420 (47333)	976 (32600)	22769 (758966)

WAST. LOADINGS IN METRIC TONS PER MONTH FOR DECEMBER, 1975
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	167 (5387)	651 (21000)	192 (6194)	113 (3645)	167 (5387)
PO. POINT	165 (5323)	77 (2484)	170 (5484)	32 (1032)	1121 (36162)
TOTAL	524 (16003)	728 (23484)	362 (11678)	145 (4677)	803 (25903)
UNITED PHOSPHORUS					
LAKE HURON	44 (1419)	47 (2606)	32 (1032)	20 (645)	44 (1419)
PO. POINT	261 (8419)	38 (1226)	72 (2323)	15 (484)	186 (5999)
TOTAL	352 (11354)	125 (4032)	104 (3355)	35 (1129)	386 (12452)
NITRATE-NITRILE NITROGEN					
LAKE HURON	3928 (126710)	5432 (175226)	1824 (58439)	928 (29335)	3928 (126710)
PO. POINT	2061 (66484)	205 (6613)	295 (9516)	90 (2903)	10245 (330884)
TOTAL	6928 (223484)	5637 (181839)	2119 (68355)	1018 (32838)	1529 (49422)
AMMONIA NITROGEN					
LAKE HURON	175 (5645)	61 (1968)	238 (7677)	43 (1387)	175 (5645)
PO. POINT	108 (3484)	232 (7484)	360 (11613)	107 (3452)	450 (14516)
TOTAL	1372 (40258)	293 (9452)	598 (19290)	150 (4839)	1786 (57678)
ORGANIC NITROGEN					
LAKE HURON	2742 (88452)	453 (14613)	577 (18613)	442 (14258)	2742 (88452)
PO. POINT	600 (19355)	77 (2484)	127 (4097)	31 (1000)	2072 (66839)
TOTAL	3342 (107807)	530 (17097)	704 (22710)	473 (15258)	566 (18258)
CHLORIDE					
LAKE HURON	89659 (2892226)	42645 (1375645)	155734 (5023677)	10498 (338645)	89659 (2892226)
PO. POINT	49234 (1588194)	5274 (170129)	10354 (334000)	2170 (70000)	258111 (8326161)
TOTAL	138893 (4480420)	47919 (1545774)	166088 (5357677)	12668 (408645)	193162 (6231032)
SILICA					
LAKE HURON	16980 (547742)	11215 (361774)	4560 (147097)	2464 (79484)	16980 (547742)
PO. POINT	3615 (116613)	165 (5323)	305 (9839)	68 (2194)	21854 (704968)
TOTAL	21304 (667290)	11380 (367097)	4865 (156936)	2532 (81678)	1249 (40291)
					40083 (1293001)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JANUARY, 1976
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	114 (3677)	153 (4935)	456 (14710)	106 (3419)	114 (3677)
MUN. POINT	78 (2516)	62 (2000)	132 (4258)	32 (1032)	793 (25580)
POINT	492 (15871)	215 (6955)	588 (18968)	138 (4451)	718 (23161)
TOTAL	684 (22064)				1625 (52418)
ORTHOPHOSPHORUS					
LAKE MURON	54 (1742)	55 (1774)	136 (4387)	9 (290)	54 (1742)
MUN. POINT	21 (677)	32 (1032)	65 (2097)	16 (516)	221 (7128)
POINT	187 (6032)	87 (2806)	201 (6484)	25 (806)	300 (9677)
TOTAL	262 (8451)				575 (18547)
NITRATE-NITRITE NITROGEN					
LAKE MURON	3569 (115129)	2594 (83677)	2893 (93323)	498 (16065)	3569 (115129)
MUN. POINT	1088 (35097)	191 (6161)	242 (7806)	120 (3871)	7073 (228162)
POINT	228 (7355)	2785 (89838)	3135 (101129)	618 (19936)	781 (25193)
TOTAL	4885 (157581)				11423 (368484)
AMMONIA NITROGEN					
LAKE MURON	152 (4903)	59 (1903)	563 (18161)	41 (1323)	152 (4903)
MUN. POINT	51 (1645)	265 (8548)	501 (16161)	102 (3290)	714 (23032)
POINT	1417 (45710)	324 (10451)	1064 (34322)	143 (4613)	2285 (73709)
TOTAL	1620 (52258)				3151 (101644)
ORGANIC NITROGEN					
LAKE MURON	3568 (115097)	400 (12905)	1140 (36774)	333 (10742)	3568 (115097)
MUN. POINT	284 (9323)	77 (2464)	140 (4516)	42 (1355)	2162 (69742)
POINT	516 (16645)	477 (15387)	1280 (41290)	375 (12097)	775 (25000)
TOTAL	4373 (141065)				6505 (209839)
CHLORIDE					
LAKE MURON	95356 (3076000)	29143 (940697)	113040 (3646452)	6476 (208903)	95356 (3076000)
MUN. POINT	17943 (580097)	5328 (171871)	9613 (31097)	2908 (93806)	16642 (5375549)
POINT	170130 (5444065)	34471 (1111968)	122653 (3956549)	9384 (302709)	187979 (6063839)
TOTAL	283469 (9144162)				449977 (14515388)
SILICA					
LAKE MURON	8650 (279032)	5220 (168387)	7655 (246935)	1956 (63097)	8650 (279032)
MUN. POINT	1940 (62581)	165 (5323)	300 (9677)	91 (2935)	16771 (541000)
POINT	700 (22581)	5365 (173710)	7955 (256612)	2047 (66032)	1256 (40516)
TOTAL	11290 (364194)				26677 (860548)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1976 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	91 (3136)	2291 (79000)	947 (32655)	336 (13655)	91 (279032)
POINTE	403 (30446)	62 (2138)	124 (4276)	29 (1000)	4517 (155756)
TOTAL	494 (16684)	2353 (81138)	1071 (36931)	425 (14655)	680 (23448)
ORTHOPHOSPHORUS					
LAKE MURDOCK	43 (1483)	364 (12552)	277 (9552)	52 (1793)	43 (279032)
POINTE	167 (5759)	30 (1034)	61 (2103)	14 (483)	860 (29656)
TOTAL	210 (7242)	394 (13586)	338 (11655)	66 (2276)	282 (9723)
NITRATE-NITRITE-NITROGEN					
LAKE MURDOCK	2866 (9828)	12350 (425862)	5353 (184586)	1669 (57552)	2866 (279032)
POINTE	7147 (246446)	174 (6172)	226 (7793)	112 (3862)	26519 (914448)
TOTAL	9913 (334626)	12524 (432030)	5579 (192379)	1781 (61414)	731 (25206)
AMMONIA-NITROGEN					
LAKE MURDOCK	122 (4207)	780 (26897)	954 (32897)	124 (4276)	122 (279032)
POINTE	442 (15241)	266 (9241)	484 (16690)	131 (4517)	2300 (79311)
TOTAL	564 (19448)	1046 (36138)	1438 (49586)	255 (8793)	2226 (76758)
ORGANIC-NITROGEN					
LAKE MURDOCK	2865 (9828)	3105 (107069)	2083 (71828)	1169 (40310)	2865 (279032)
POINTE	2081 (71754)	75 (2586)	131 (4517)	40 (1374)	8436 (290966)
TOTAL	4946 (169932)	3180 (109655)	2214 (76345)	1209 (41690)	729 (25137)
CHLORIDE					
LAKE MURDOCK	76545 (2640862)	104524 (3742207)	136266 (4698828)	19996 (689517)	76545 (279032)
POINTE	117075 (4037044)	4985 (171897)	8993 (310103)	2721 (93828)	341461 (13167621)
TOTAL	193620 (6677906)	113509 (3914103)	145259 (5008931)	22717 (783345)	175452 (6063862)
SILICA					
LAKE MURDOCK	6947 (239552)	20758 (715793)	13040 (449655)	5135 (177069)	6947 (279032)
POINTE	9328 (321455)	155 (5345)	281 (9690)	85 (2931)	48261 (1664172)
TOTAL	16275 (560947)	20913 (721138)	13321 (459345)	5220 (180000)	1175 (40518)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH, 1976
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLK. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDO	111 (3581)				111 (3581)
POINTE	1015 (32742)	834 (26903)	419 (13516)	837 (27000)	3105 (100161)
TOTAL	1126 (33053)	834 (26903)	419 (13516)	837 (27000)	3105 (100161)
ORTHOPHOSPHORUS					
LAKE MURDO	52 (1677)				52 (1677)
POINTE	174 (5742)	163 (5258)	73 (2355)	77 (2484)	491 (15839)
TOTAL	226 (7419)	163 (5258)	73 (2355)	77 (2484)	491 (15839)
NITRATE-NITRITE NITROGEN					
LAKE MURDO	3482 (112323)				3482 (112323)
POINTE	7465 (256935)	7302 (235544)	3132 (101032)	2903 (93645)	21302 (687160)
TOTAL	10947 (376045)	7302 (235544)	3132 (101032)	2903 (93645)	25566 (824708)
AMMONIA NITROGEN					
LAKE MURDO	148 (4774)				148 (4774)
POINTE	495 (15968)	289 (9323)	355 (11452)	202 (6516)	1341 (43259)
TOTAL	643 (21742)	289 (9323)	355 (11452)	202 (6516)	2373 (76549)
ORGANIC NITROGEN					
LAKE MURDO	3481 (112290)				3481 (112290)
POINTE	2230 (71935)	1403 (45258)	1014 (32710)	1596 (45032)	6043 (194935)
TOTAL	5711 (184225)	1403 (45258)	1014 (32710)	1596 (45032)	10302 (332322)
CHLORIDE					
LAKE MURDO	93030 (3000968)				93030 (3000968)
POINTE	126736 (4088258)	88897 (2867645)	126982 (4096194)	31739 (1023834)	374354 (12075436)
TOTAL	219766 (7089226)	88897 (2867645)	126982 (4096194)	31739 (1023834)	655363 (21140743)
SILICA					
LAKE MURDO	8439 (272226)				8439 (272226)
POINTE	10594 (341742)	12395 (399839)	6996 (225677)	4085 (129806)	38070 (1228064)
TOTAL	19033 (613968)	12395 (399839)	6996 (225677)	4085 (129806)	47765 (1540806)

WASTEWATER LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1976 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR MARIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	116 (3867)	59 (1967)	79 (2633)	191 (6367)	116 (3867)
WOLF POINT	233 (7767)	63 (2103)	123 (4100)	30 (1000)	562 (18734)
POWELL	481 (16033)	122 (4067)	202 (6733)	221 (7367)	697 (23233)
TOTAL	830 (27667)				1375 (45834)
ORTHOPHOSPHORUS					
LAKE MURDOCK	55 (1833)	26 (867)	16 (533)	27 (900)	55 (1833)
WOLF POINT	53 (1767)	31 (1033)	57 (1900)	16 (533)	122 (4067)
POWELL	183 (6100)	57 (1900)	73 (2433)	43 (1433)	287 (9566)
TOTAL	291 (9700)				464 (15466)
NITRATE-NITRITIC NITROGEN					
LAKE MURDOCK	3639 (121300)	1484 (49467)	764 (25467)	1245 (41500)	3639 (121300)
WOLF POINT	2669 (88967)	185 (6167)	234 (7800)	116 (3867)	6162 (205401)
POWELL	222 (7400)	1069 (35634)	996 (33267)	1361 (45367)	757 (25234)
TOTAL	6530 (217667)				10558 (351935)
AMMONIA NITROGEN					
LAKE MURDOCK	155 (5167)	47 (1567)	127 (4233)	46 (1533)	155 (5167)
WOLF POINT	136 (4533)	254 (8467)	462 (15400)	135 (4500)	356 (11866)
POWELL	1386 (46000)	301 (10034)	589 (19633)	181 (6033)	2231 (74167)
TOTAL	1671 (55700)				2742 (91400)
ORGANIC NITROGEN					
LAKE MURDOCK	3634 (121267)	165 (5500)	307 (10233)	462 (15400)	3634 (121267)
WOLF POINT	733 (24433)	78 (2600)	135 (4500)	41 (1367)	1667 (55566)
POWELL	500 (16667)	243 (8100)	442 (14733)	503 (16767)	754 (25134)
TOTAL	4871 (162367)				6059 (201967)
CHLORIDE					
LAKE MURDOCK	97232 (3241067)	27338 (911267)	89435 (2981167)	15576 (519200)	97232 (3241067)
WOLF POINT	50310 (167700)	5156 (171867)	9303 (310100)	2815 (93633)	182659 (6088634)
POWELL	184642 (5488967)	32694 (1083134)	96738 (3291267)	18391 (613033)	181916 (6063867)
TOTAL	312184 (10306134)				461807 (15393568)
SILICA					
LAKE MURDOCK	8820 (294000)	3604 (120133)	2218 (73933)	3132 (104400)	8820 (294000)
WOLF POINT	3979 (132633)	166 (5533)	291 (9700)	88 (2933)	12933 (431099)
POWELL	677 (22567)	3764 (125466)	2509 (83633)	3220 (107333)	1416 (40533)
TOTAL	13476 (449200)				22969 (765632)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MAY, 1976
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. C/LR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	126 (4065)	52 (1677)	44 (1419)	136 (4387)	126 (4065)
AG. POINT	246 (7935)	66 (2129)	113 (3645)	32 (1032)	478 (15418)
PULLT	497 (16032)	118 (3806)	157 (5064)	168 (5419)	708 (22836)
TOTAL	869 (28032)				1312 (42321)
ORTHO PHOSPHORUS					
LAKE MURON	59 (1903)	27 (871)	16 (516)	23 (742)	59 (1903)
AG. POINT	60 (1935)	32 (1032)	48 (1548)	16 (516)	126 (4064)
PULLT	190 (6129)	59 (1903)	64 (2064)	39 (1256)	286 (9225)
TOTAL	309 (9967)				471 (15192)
NITRATE-NITRITE-NITROGEN					
LAKE MURON	3934 (126903)	1476 (47613)	493 (15903)	1032 (33290)	3934 (126903)
AG. POINT	2746 (90258)	191 (6161)	242 (7806)	120 (3871)	5799 (187064)
PULLT	224 (7387)	1667 (53774)	735 (23709)	1152 (37161)	782 (25225)
TOTAL	6961 (224548)				10515 (339192)
AMMONIA NITROGEN					
LAKE MURON	167 (5387)	53 (1710)	57 (1839)	49 (1581)	167 (5387)
AG. POINT	152 (4903)	260 (8387)	457 (14742)	136 (4387)	311 (10033)
PULLT	1427 (46032)	313 (10097)	514 (16581)	185 (5968)	2280 (73548)
TOTAL	1746 (56322)				2758 (88968)
ORGANIC NITROGEN					
LAKE MURON	3933 (126871)	163 (5258)	178 (5742)	417 (13452)	3933 (126871)
AG. POINT	825 (26613)	80 (2581)	137 (4419)	42 (1355)	1583 (51065)
PULLT	516 (16645)	243 (7839)	315 (10161)	459 (14807)	775 (25000)
TOTAL	5274 (170129)				6291 (202936)
CHLORIDE					
LAKE MURON	105124 (3391097)	3189 (1028677)	81490 (2628710)	11488 (370581)	105124 (3391097)
AG. POINT	87477 (2176677)	5328 (171871)	9613 (310097)	2408 (93806)	192344 (6204645)
PULLT	170130 (5488065)	37217 (1200548)	91103 (2938407)	14396 (464387)	187479 (6063839)
TOTAL	342731 (11055839)				485447 (15659581)
SILICA					
LAKE MURON	9536 (307613)	3518 (113484)	1482 (47806)	2588 (83484)	9536 (307613)
AG. POINT	4240 (138387)	165 (5323)	300 (9677)	91 (2935)	11878 (383161)
PULLT	700 (22581)	3683 (118807)	1782 (57483)	2674 (86419)	1256 (40516)
TOTAL	14526 (468581)				22670 (731290)

LAKE LOADINGS IN METRIC TONS PER MONTH FOR JUNE, 1976 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLN BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	122 (4067)	15 (500)	15 (500)	26 (867)	122 (4067)
LAKE POINTE	32 (1067)	59 (1967)	110 (3667)	30 (1000)	88 (2934)
LAKE POINTE	471 (15900)	74 (2467)	125 (4167)	56 (1867)	676 (22534)
TOTAL	624 (21034)				886 (29535)
ORTHOPHOSPHORUS					
LAKE MURDOCK	58 (1933)	8 (267)	5 (167)	4 (133)	58 (1933)
LAKE POINTE	9 (300)	30 (1000)	46 (1533)	15 (500)	26 (867)
LAKE POINTE	180 (6000)	34 (1267)	51 (1700)	19 (633)	271 (9033)
TOTAL	247 (8233)				355 (11833)
NITRATE-NITRITE-NITROGEN					
LAKE MURDOCK	3841 (128033)	633 (21100)	304 (10133)	184 (6133)	3841 (128033)
LAKE POINTE	407 (13567)	185 (6167)	234 (7800)	116 (3867)	1528 (50933)
LAKE POINTE	221 (7367)	418 (27267)	538 (17933)	300 (10000)	756 (25201)
TOTAL	4469 (149667)				6125 (204167)
AMMONIA-NITROGEN					
LAKE MURDOCK	163 (5433)	6 (200)	15 (500)	8 (267)	163 (5433)
LAKE POINTE	25 (833)	200 (6667)	439 (14633)	93 (3100)	54 (1800)
LAKE POINTE	1369 (45633)	206 (6867)	454 (15133)	101 (3367)	2101 (70033)
TOTAL	1557 (51896)				2318 (77266)
ORGANIC-NITROGEN					
LAKE MURDOCK	3840 (128000)	74 (2467)	80 (2667)	165 (5500)	3840 (128000)
LAKE POINTE	160 (5333)	72 (2400)	135 (4500)	41 (1367)	479 (15967)
LAKE POINTE	500 (16667)	146 (4867)	215 (7167)	206 (6867)	748 (24934)
TOTAL	4500 (150000)				5067 (168901)
CHLORIDE					
LAKE MURDOCK	102634 (3421133)	12899 (429967)	44360 (1478667)	3715 (123833)	102634 (3421133)
LAKE POINTE	13478 (449267)	5156 (171867)	9303 (310100)	2815 (93833)	74452 (2481734)
LAKE POINTE	164642 (5488067)	14055 (601834)	53663 (1788767)	6530 (217666)	181916 (6063867)
TOTAL	280754 (9354467)				359002 (11966734)
SILICA					
LAKE MURDOCK	9311 (310367)	1836 (61200)	936 (31200)	756 (25200)	9311 (310367)
LAKE POINTE	949 (31633)	160 (5333)	291 (9700)	88 (2933)	4477 (149233)
LAKE POINTE	677 (22567)	1496 (6533)	1227 (40900)	844 (28133)	1216 (40533)
TOTAL	10937 (364567)				15004 (50133)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JULY, 1976
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURRAY	127 (4097)	67 (2161)	58 (1871)	127 (4097)
LOW POINT	150 (4877)	127 (4097)	32 (1032)	264 (8516)
PULP	495 (15468)	194 (6258)	90 (2903)	708 (22839)
TOTAL	758 (24452)			1099 (35452)
ORTHOPHOSPHORUS				
LAKE MURRAY	60 (1935)	9 (290)	6 (194)	60 (1935)
LOW POINT	33 (1065)	56 (1806)	16 (516)	52 (1678)
PULP	167 (6032)	65 (2096)	22 (710)	284 (9160)
TOTAL	260 (9032)			396 (12773)
NITRATE-NITRITE NITROGEN				
LAKE MURRAY	3987 (128613)	556 (17935)	399 (12871)	3987 (128613)
LOW POINT	1732 (55871)	241 (7774)	120 (3871)	2663 (92354)
PULP	229 (7387)	797 (25709)	514 (16742)	781 (25193)
TOTAL	5948 (191871)			7631 (246160)
AMMONIA NITROGEN				
LAKE MURRAY	169 (5452)	74 (2387)	17 (548)	169 (5452)
LOW POINT	42 (2645)	490 (15806)	106 (3419)	175 (5645)
PULP	1415 (45635)	564 (18193)	123 (3967)	2189 (70612)
TOTAL	1666 (53742)			2533 (81709)
ORGANIC NITROGEN				
LAKE MURRAY	3985 (128548)	245 (7903)	205 (6613)	3985 (128548)
LOW POINT	442 (14254)	140 (4516)	42 (1355)	926 (29871)
PULP	516 (16645)	385 (12419)	247 (7968)	771 (24871)
TOTAL	4943 (159451)			5682 (183290)
CHLORIDE				
LAKE MURRAY	106520 (3436129)	90361 (2914871)	5912 (190710)	106520 (3436129)
LOW POINT	18243 (58844)	9613 (310097)	2908 (93806)	123360 (3979355)
PULP	170130 (5488465)	99974 (3224968)	8020 (284516)	187479 (6063839)
TOTAL	294893 (9512678)			417859 (13479323)
SILICA				
LAKE MURRAY	9663 (311710)	1962 (63290)	1280 (41290)	9663 (311710)
LOW POINT	2490 (80323)	300 (9677)	91 (2935)	6864 (221419)
PULP	700 (22581)	2262 (72967)	1371 (44225)	1256 (40516)
TOTAL	12853 (414614)			17783 (573645)

WASTE LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1976
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURROW	125 (4032)			125 (4032)
LOS POINT	71 (2290)			71 (2290)
TOTAL	196 (6322)			196 (6322)
ORTHOPHOSPHORUS				
LAKE MURROW	59 (1903)			59 (1903)
LOS POINT	14 (441)			14 (441)
TOTAL	73 (2344)			73 (2344)
NITRATE-NITRITE-NITROGEN				
LAKE MURROW	3917 (126355)			3917 (126355)
LOS POINT	882 (27452)			882 (27452)
TOTAL	4800 (153807)			4800 (153807)
AMMONIA NITROGEN				
LAKE MURROW	166 (5355)			166 (5355)
LOS POINT	42 (1355)			42 (1355)
TOTAL	208 (6710)			208 (6710)
ORGANIC NITROGEN				
LAKE MURROW	3916 (126323)			3916 (126323)
LOS POINT	217 (7000)			217 (7000)
TOTAL	4133 (133323)			4133 (133323)
CHLORIDE				
LAKE MURROW	104659 (3376097)			104659 (3376097)
LOS POINT	7840 (252403)			7840 (252403)
TOTAL	112500 (3628500)			112500 (3628500)
SILICA				
LAKE MURROW	9494 (306258)			9494 (306258)
LOS POINT	1424 (45935)			1424 (45935)
TOTAL	10918 (352193)			10918 (352193)

HASIN LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1976 (AVE DAILY LOADS IN KG/DAY)

	OFF/ST. CLP. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	118 (3933)	1 (33)	28 (933)	28 (933)	118 (3933)
NO. POINT	50 (1000)	34 (1133)	118 (3933)	30 (1000)	87 (2099)
POINT	473 (15767)	35 (1166)	146 (4866)	58 (1933)	655 (21833)
TOTAL	621 (20700)				860 (28665)
ORTHU PHOSPHORUS					
LAKE MURDOCK	56 (1867)	2 (67)	4 (133)	6 (200)	56 (1867)
NO. POINT	9 (300)	18 (600)	48 (1600)	15 (500)	21 (700)
POINT	177 (5900)	20 (667)	52 (1733)	21 (700)	258 (8600)
TOTAL	242 (8067)				335 (11167)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	3706 (123533)	14 (467)	257 (8567)	234 (7800)	3706 (123533)
NO. POINT	335 (11100)	133 (4433)	232 (7733)	116 (3867)	838 (27934)
POINT	269 (6967)	147 (4900)	489 (16300)	350 (11667)	690 (23000)
TOTAL	4294 (141600)				5234 (174467)
AMMONIA NITROGEN					
LAKE MURDOCK	157 (5233)	1 (33)	85 (2833)	7 (233)	157 (5233)
NO. POINT	21 (700)	130 (4333)	480 (16667)	99 (3300)	114 (3799)
POINT	1366 (45533)	131 (4366)	525 (17500)	106 (3533)	2035 (67833)
TOTAL	1544 (51466)				2306 (76665)
ORGANIC NITROGEN					
LAKE MURDOCK	3705 (123500)	8 (267)	116 (3867)	141 (4700)	3705 (123500)
NO. POINT	122 (4067)	49 (1633)	135 (4500)	41 (1367)	367 (12901)
POINT	495 (16500)	57 (1900)	251 (8367)	182 (6067)	720 (24000)
TOTAL	4322 (144067)				4812 (160401)
CHLORIDE					
LAKE MURDOCK	99032 (3301067)				99032 (3301067)
NO. POINT	3526 (117333)	2694 (89967)	65366 (2112200)	3826 (127533)	73411 (2447033)
POINT	161316 (5377200)	3895 (129833)	9303 (310100)	2815 (93833)	177329 (5910966)
TOTAL	263868 (8795600)	6594 (219800)	72669 (2422300)	6641 (221366)	349772 (11659066)
SILICA					
LAKE MURDOCK	8984 (299467)				8984 (299467)
NO. POINT	720 (24000)	265 (8833)	1024 (34267)	776 (25667)	2769 (92467)
POINT	677 (22567)	160 (5333)	291 (9700)	86 (2933)	1216 (40533)
TOTAL	10301 (346034)	425 (14166)	1319 (43967)	864 (28600)	12989 (432467)

WASTE LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1976
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	117 (3774)				117 (3774)
OUT POINT	59 (1250)	1 (32)	27 (471)	61 (1968)	128 (4129)
POINT	491 (15039)	40 (1290)	111 (3581)	32 (1032)	674 (21742)
TOTAL	647 (20071)	41 (1322)	138 (4452)	93 (3000)	919 (29645)
ORTHOPHOSPHORUS					
LAKE MURDOCK	55 (1774)				55 (1774)
OUT POINT	10 (323)	3 (97)	6 (194)	6 (194)	25 (808)
POINT	185 (5965)	21 (677)	48 (1548)	16 (516)	270 (8709)
TOTAL	250 (8065)	24 (774)	54 (1742)	22 (710)	350 (11291)
NITRATE-NITRITE-NITROGEN					
LAKE MURDOCK	3656 (117935)				3656 (117935)
OUT POINT	457 (14742)	28 (903)	276 (8903)	474 (15290)	1235 (39838)
POINT	228 (7355)	180 (5806)	238 (7677)	120 (3871)	766 (24709)
TOTAL	4341 (140632)	208 (6709)	514 (16580)	594 (19161)	5657 (182482)
AMMONIA NITROGEN					
LAKE MURDOCK	155 (5000)				155 (5000)
OUT POINT	25 (806)	1 (32)	78 (2516)	84 (1419)	148 (4773)
POINT	1414 (45613)	145 (4677)	451 (14548)	105 (3387)	2115 (68225)
TOTAL	1594 (51419)	146 (4709)	529 (17064)	149 (4806)	2418 (77998)
ORGANIC NITROGEN					
LAKE MURDOCK	3655 (117903)				3655 (117903)
OUT POINT	145 (4677)	14 (452)	120 (3871)	349 (11258)	628 (20258)
POINT	516 (16645)	59 (1903)	135 (4355)	42 (1355)	752 (24258)
TOTAL	4316 (139225)	73 (2355)	255 (8226)	391 (12613)	5035 (162419)
CHLORIDE					
LAKE MURDOCK	97682 (3151032)				97682 (3151032)
OUT POINT	5871 (187307)	4153 (133968)	78474 (2531419)	6153 (198484)	94651 (3053258)
POINT	170130 (5488065)	4606 (148581)	9613 (310097)	2908 (93806)	187257 (6040549)
TOTAL	273683 (8828094)	8759 (282549)	88087 (2841516)	9061 (292290)	379590 (12244839)
SILICA					
LAKE MURDOCK	8861 (285839)				8861 (285839)
OUT POINT	949 (30613)	481 (15516)	1106 (35677)	1535 (49516)	4071 (131322)
POINT	700 (22581)	164 (5290)	300 (9677)	91 (2935)	1255 (40483)
TOTAL	10510 (339033)	645 (20806)	1406 (45354)	1626 (52451)	14187 (457644)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1976
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOJ	105 (3500)				105 (3500)
W. BASIN POINT	65 (2167)	1 (33)	29 (967)	54 (1800)	149 (4967)
E. BASIN POINT	475 (15833)	34 (1267)	104 (3467)	30 (1000)	647 (21567)
TOTAL	645 (21500)	39 (1300)	133 (4434)	84 (2800)	901 (30034)
ORTHOPHOSPHORUS					
LAKE MURDOJ	49 (1633)				49 (1633)
W. BASIN POINT	13 (433)	3 (100)	8 (267)	6 (267)	32 (1067)
E. BASIN POINT	178 (5933)	20 (667)	46 (1533)	16 (533)	260 (8666)
TOTAL	240 (7999)	23 (767)	54 (1800)	24 (800)	341 (11366)
NITRATE-NITRILE NITROGEN					
LAKE MURDOJ	3302 (110067)				3302 (110067)
W. BASIN POINT	713 (23967)	29 (967)	264 (8800)	458 (15267)	1470 (49001)
E. BASIN POINT	220 (7333)	139 (4633)	231 (7700)	116 (3867)	706 (23533)
TOTAL	4241 (141567)	168 (5600)	495 (16500)	574 (19134)	5478 (182601)
AMMONIA NITROGEN					
LAKE MURDOJ	140 (4667)				140 (4667)
W. BASIN POINT	30 (1000)	1 (33)	74 (2467)	35 (1167)	140 (4667)
E. BASIN POINT	1368 (45600)	145 (4833)	436 (14333)	101 (3367)	2050 (68333)
TOTAL	1538 (51267)	146 (4866)	510 (17000)	136 (4534)	2330 (77667)
ORGANIC NITROGEN					
LAKE MURDOJ	3301 (110033)				3301 (110033)
W. BASIN POINT	142 (4667)	14 (467)	134 (4467)	327 (10900)	657 (21901)
E. BASIN POINT	500 (16667)	54 (1800)	125 (4167)	41 (1367)	720 (24001)
TOTAL	3983 (132767)	68 (2267)	259 (8634)	368 (12267)	4678 (155935)
CHLORIDE					
LAKE MURDOJ	88229 (2940967)				88229 (2940967)
W. BASIN POINT	6849 (228300)	6452 (215067)	8838 (2954000)	5726 (190867)	107665 (3588834)
E. BASIN POINT	160494 (5349667)	4049 (134967)	9303 (310100)	2815 (93833)	176663 (5888767)
TOTAL	255574 (8519134)	10501 (350034)	97441 (3264700)	8541 (284700)	372557 (12418568)
SILICA					
LAKE MURDOJ	8004 (266800)				8004 (266800)
W. BASIN POINT	1187 (39567)	422 (14067)	1138 (37933)	1466 (48867)	4213 (140434)
E. BASIN POINT	677 (22567)	160 (5333)	291 (9700)	88 (2933)	1216 (40533)
TOTAL	9868 (324934)	582 (19400)	1429 (47633)	1554 (51800)	13433 (447767)

WAST. LOADINGS IN KILIC TONS PER MONTH FOR DECEMBER, 1976 (AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	101 (325P)	1 (32)	49 (1541)	40 (1290)	101 (3258)
LAKE POINT	41 (1323)			32 (1032)	131 (4226)
LAKE POINT	490 (15406)	45 (1452)	112 (3613)	72 (2322)	679 (21903)
TOTAL	632 (20387)	46 (1484)	161 (5194)		911 (29387)
UNITED PHOSPHORUS					
LAKE HURON	47 (1516)				47 (1516)
LAKE POINT	14 (452)	2 (65)	7 (226)	6 (194)	29 (937)
LAKE POINT	184 (5935)	22 (710)	49 (1581)	16 (516)	271 (8742)
TOTAL	245 (7903)	24 (775)	56 (1807)	22 (710)	347 (11195)
NITRATE-NITRITE NITROGEN					
LAKE HURON	3168 (102194)				3168 (102194)
LAKE POINT	499 (16097)	42 (1355)	405 (13065)	273 (8806)	1219 (39323)
LAKE POINT	228 (7355)	178 (5742)	240 (7742)	120 (3871)	766 (24710)
TOTAL	3895 (125646)	220 (7097)	645 (20807)	393 (12677)	5153 (166227)
AMMONIA NITROGEN					
LAKE HURON	135 (4355)				135 (4355)
LAKE POINT	31 (1000)	1 (32)	117 (3774)	26 (839)	175 (5645)
LAKE POINT	1413 (45581)	155 (5000)	456 (14710)	96 (3097)	2120 (68388)
TOTAL	1579 (50936)	156 (5032)	573 (18484)	122 (3936)	2430 (78388)
ORGANIC NITROGEN					
LAKE HURON	3168 (102194)				3168 (102194)
LAKE POINT	142 (4581)	15 (484)	170 (5484)	225 (7258)	552 (17607)
LAKE POINT	516 (16645)	68 (2194)	133 (4290)	42 (1355)	759 (24484)
TOTAL	3826 (123420)	83 (2678)	303 (9774)	267 (8613)	4479 (144485)
CHLORIDE					
LAKE HURON	84658 (2730903)				84658 (2730903)
LAKE POINT	6014 (194006)	4915 (158548)	113492 (3661032)	4459 (143839)	128880 (4157419)
LAKE POINT	165123 (5326548)	5238 (168988)	9613 (310097)	2908 (93806)	182882 (5899419)
TOTAL	255795 (8251451)	10153 (327516)	123105 (3971129)	7367 (237645)	396470 (12787741)
SILICA					
LAKE HURON	7680 (247742)				7680 (247742)
LAKE POINT	941 (30355)	695 (22419)	1570 (50645)	1264 (40774)	4470 (144193)
LAKE POINT	709 (22581)	165 (5323)	300 (9677)	91 (2935)	1256 (40516)
TOTAL	9321 (300678)	860 (27742)	1870 (60322)	1355 (43709)	13406 (432451)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JANUARY, 1977
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	81 (2613)				81 (2613)
NEW POINT	14 (452)	1 (32)	5 (161)	12 (387)	32 (1032)
POINT	376 (12129)	50 (1613)	125 (4032)	33 (1065)	584 (18839)
TOTAL	471 (15194)	51 (1645)	130 (4193)	45 (1452)	697 (22484)
ORTHO PHOSPHORUS					
LAKE HURON	38 (1226)				38 (1226)
NEW POINT	2 (65)				2 (65)
POINT	152 (4903)	26 (839)	66 (2129)	17 (548)	261 (8419)
TOTAL	192 (6194)	27 (871)	70 (2256)	19 (613)	308 (9936)
NITRATE-NITRITE NITROGEN					
LAKE HURON	2542 (82000)				2542 (82000)
NEW POINT	125 (4032)	26 (839)	33 (1065)	70 (2258)	254 (8194)
POINT	224 (7226)	156 (5032)	234 (7548)	115 (3710)	729 (23516)
TOTAL	2891 (93258)	182 (5871)	267 (8613)	185 (5968)	3525 (113710)
AMMONIA NITROGEN					
LAKE HURON	108 (3484)				108 (3484)
NEW POINT	16 (516)	0 (0)	2 (65)	7 (226)	25 (807)
POINT	1203 (38806)	154 (4968)	463 (14935)	101 (3258)	1921 (61967)
TOTAL	1327 (42806)	154 (4968)	465 (15000)	108 (3484)	2054 (66258)
ORGANIC NITROGEN					
LAKE HURON	2540 (81935)				2540 (81935)
NEW POINT	42 (1364)	11 (355)	33 (1065)	128 (4129)	264 (8517)
POINT	647 (20819)	68 (2194)	121 (3903)	44 (1419)	880 (28135)
TOTAL	3079 (99322)	79 (2549)	154 (4968)	172 (5548)	3484 (112387)
CHLORIDE					
LAKE HURON	67912 (2190710)				67912 (2190710)
NEW POINT	2316 (74710)	3913 (126226)	2916 (94065)	2635 (91452)	11980 (386453)
POINT	163597 (5276032)	4941 (159387)	10023 (323323)	2986 (96323)	181507 (5855065)
TOTAL	233725 (7541452)	8854 (285613)	12939 (417388)	5621 (187775)	261399 (843228)
SILICA					
LAKE HURON	6161 (198742)				6161 (198742)
NEW POINT	454 (14645)	105 (3387)	318 (10258)	379 (12226)	1256 (40516)
POINT	637 (20548)	172 (5548)	314 (10129)	93 (3000)	1216 (39225)
TOTAL	7252 (233935)	277 (8935)	632 (20387)	472 (15226)	8633 (278483)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1977
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	81 (2893)	31 (1107)	325 (11607)	36 (1286)	81 (2893)
FOR POINT	37 (1321)	63 (2250)	143 (5107)	30 (1071)	429 (15321)
POINT	343 (12256)	94 (3357)	468 (16714)	66 (2357)	579 (20678)
TOTAL	461 (16468)				1089 (38842)
ORTHOPHOSPHORUS					
LAKE MURPHY	38 (1357)	8 (286)	52 (1857)	1 (36)	38 (1357)
FOR POINT	12 (429)	32 (1143)	69 (2464)	15 (536)	73 (2608)
POINT	148 (5066)	40 (1429)	121 (4321)	16 (572)	256 (9143)
TOTAL	190 (6786)				367 (13108)
NITRATE-NITRITE NITROGEN					
LAKE MURPHY	2547 (90964)	885 (31607)	1869 (66750)	185 (6607)	2547 (90964)
FOR POINT	576 (20571)	165 (6007)	225 (8036)	101 (3607)	3515 (125335)
POINT	209 (7464)	1070 (38214)	2094 (74786)	286 (10214)	720 (25714)
TOTAL	3332 (118999)				6762 (242213)
AMMONIA NITROGEN					
LAKE MURPHY	108 (3857)	4 (143)	98 (3500)	13 (464)	108 (3857)
FOR POINT	30 (1071)	167 (5964)	445 (15893)	91 (3250)	145 (5178)
POINT	1094 (39250)	171 (6107)	543 (19393)	104 (3714)	1802 (64357)
TOTAL	1237 (44176)				2055 (73392)
ORGANIC NITROGEN					
LAKE MURPHY	2547 (90964)	198 (7071)	1119 (39964)	237 (8464)	2547 (90964)
FOR POINT	144 (5114)	73 (2607)	131 (4679)	39 (1393)	1742 (62213)
POINT	406 (14506)	271 (9678)	1250 (44643)	276 (9857)	649 (23179)
TOTAL	3141 (112178)				4934 (176356)
CHLORINE					
LAKE MURPHY	68062 (2430786)	10618 (379214)	69944 (2498000)	4088 (146000)	68062 (2430786)
FOR POINT	6241 (222493)	5113 (182607)	9088 (324571)	2696 (96286)	90891 (3246107)
POINT	150910 (5389643)	15731 (561821)	79032 (2822571)	6784 (242286)	147807 (5393107)
TOTAL	225213 (8043322)				326760 (11670000)
SILICA					
LAKE MURPHY	6174 (220500)	1071 (38250)	4453 (166179)	631 (22679)	6174 (220500)
FOR POINT	1129 (40321)	159 (5679)	284 (10143)	84 (3000)	7684 (274229)
POINT	576 (20571)	1230 (43929)	4937 (176322)	915 (32679)	1103 (39393)
TOTAL	7679 (281392)				14961 (534322)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH, 1977
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLM BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	112 (3290)	775 (25000)	505 (16290)	645 (20806)	102 (3290)
NO. POINT	1330 (42903)	78 (2516)	159 (5129)	33 (1065)	3255 (10499)
POINT	500 (12256)	78 (2516)	660 (21419)	678 (21871)	650 (20966)
TOTAL	1812 (50451)	853 (27516)			8007 (129257)
ORTHOPHOSPHORUS					
LAKE MURPHY	48 (1548)	159 (5129)	120 (3871)	54 (1742)	48 (1548)
NO. POINT	202 (6516)	36 (1226)	79 (2548)	17 (548)	535 (17258)
POINT	157 (5065)	197 (6355)	199 (6419)	71 (2290)	291 (9387)
TOTAL	407 (13129)				874 (28193)
NITRATE-NITRILE NITROGEN					
LAKE MURPHY	3186 (102774)	11408 (368000)	4773 (153968)	2194 (70774)	3186 (102774)
NO. POINT	9024 (291097)	206 (6645)	249 (8032)	123 (3968)	27399 (863039)
POINT	231 (7452)	11614 (374645)	5022 (162000)	2317 (74742)	809 (26097)
TOTAL	12441 (401523)				31394 (1012710)
AMMONIA NITROGEN					
LAKE MURPHY	135 (4355)	252 (8129)	200 (6452)	112 (3613)	135 (4355)
NO. POINT	504 (16419)	302 (9742)	503 (16226)	144 (4645)	1073 (34613)
POINT	1259 (40613)	554 (17871)	703 (22678)	256 (8256)	2208 (71226)
TOTAL	1903 (61387)				3416 (110194)
ORGANIC NITROGEN					
LAKE MURPHY	3185 (102742)	2880 (92903)	1937 (62484)	1191 (38419)	3185 (102742)
NO. POINT	3526 (113742)	86 (2744)	146 (4710)	44 (1414)	9534 (307548)
POINT	450 (14516)	2966 (95677)	2083 (67194)	1235 (39438)	726 (23419)
TOTAL	7161 (231000)				13445 (433709)
CHLORIDE					
LAKE MURPHY	85123 (2745903)	70425 (2271774)	62448 (2015742)	22086 (711161)	85123 (2745903)
NO. POINT	168702 (5442600)	5660 (182581)	10062 (324581)	2986 (96323)	241837 (7801193)
POINT	340715 (10976416)	76085 (2454355)	72550 (2340525)	25032 (807484)	167410 (6045485)
TOTAL					514370 (16592581)
SILICA					
LAKE MURPHY	7722 (249097)	10883 (351065)	9821 (316806)	5871 (189387)	7722 (249097)
NO. POINT	10212 (329419)	176 (5677)	314 (10129)	93 (3000)	36787 (1166677)
POINT	637 (20540)	11059 (356742)	10135 (326935)	5964 (192387)	1220 (39354)
TOTAL	18571 (590000)				45729 (1475126)

WASTE TREATMENT PLANT - METRIC TONS PER MONTH FOR APRIL, 1977
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURPHY	102 (3400)	213 (7100)	211 (7033)	102 (3400)
POW. PLANT	241 (9367)	153 (5100)	32 (1067)	1594 (53133)
CUL-1	566 (12267)	366 (12200)	243 (8100)	829 (20967)
TOTAL	751 (25034)	965 (32106)	243 (8100)	2325 (77500)
DIETHYL PHOSPHORUS				
LAKE MURPHY	48 (1600)	48 (1600)	24 (800)	48 (1600)
POW. PLANT	69 (2360)	76 (2533)	16 (533)	264 (8933)
CUL-1	152 (5067)	124 (4133)	40 (1333)	281 (9366)
TOTAL	269 (8967)	164 (5466)	40 (1333)	597 (19899)
NITRATE-NITRITIC NITROGEN				
LAKE MURPHY	3184 (106133)	2640 (89333)	1179 (39300)	3184 (106133)
POW. PLANT	3316 (110600)	281 (8033)	119 (3967)	16745 (558166)
CUL-1	224 (7467)	2921 (97366)	1298 (43267)	783 (26100)
TOTAL	6724 (224200)	9767 (325566)	1298 (43267)	20712 (690399)
AMMONIA NITROGEN				
LAKE MURPHY	135 (4500)	92 (3067)	43 (1433)	135 (4500)
POW. PLANT	115 (3833)	476 (15867)	139 (4633)	415 (13833)
CUL-1	1217 (40567)	568 (18934)	182 (6066)	2125 (70834)
TOTAL	1467 (48900)	658 (22267)	182 (6066)	2675 (89167)
ORGANIC NITROGEN				
LAKE MURPHY	3143 (106100)	2904 (96800)	533 (17767)	3143 (106100)
POW. PLANT	810 (27000)	181 (4700)	42 (1400)	7482 (249400)
CUL-1	435 (14500)	3045 (101500)	575 (19167)	701 (23367)
TOTAL	4428 (147600)	3330 (110600)	575 (19167)	11366 (378867)
CHLORIDE				
LAKE MURPHY	85078 (2835933)	36096 (1203200)	13936 (464533)	85078 (2835933)
POW. PLANT	73895 (2448833)	9737 (324567)	2889 (96300)	182794 (6093133)
CUL-1	163200 (5442000)	45033 (1527767)	16825 (560833)	181363 (6045434)
TOTAL	321453 (10727766)	68744 (2158134)	16825 (560833)	449235 (14974500)
SILICA				
LAKE MURPHY	7718 (257267)	5206 (175533)	2758 (91933)	7718 (257267)
POW. PLANT	8972 (165733)	170 (5667)	91 (3033)	22194 (739799)
CUL-1	616 (20533)	304 (10133)	2849 (94966)	1101 (36366)
TOTAL	13306 (443533)	5570 (185666)	2849 (94966)	31093 (1036432)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MAY, 1977
(AVE DAILY LOADS IN KG/DAY)

	DELTA/CIN BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURKIN	105 (3387)				105 (3387)
NO. POINT	34 (1226)	184 (5935)	47 (1516)	33 (1065)	302 (9742)
POLIT	377 (12161)	75 (2419)	142 (4581)	33 (1065)	627 (20226)
TOTAL	520 (16774)	259 (8354)	189 (6097)	66 (2130)	1034 (33555)
ORTHOPHOSPHORUS					
LAKE MURKIN	50 (1613)				50 (1613)
NO. POINT	4 (126)	46 (1484)	18 (581)	1 (32)	74 (2387)
POLIT	154 (4966)	38 (1226)	71 (2290)	16 (516)	279 (9000)
TOTAL	213 (6871)	84 (2710)	89 (2671)	17 (548)	403 (13000)
NITRATE-NITRITE-NITROGEN					
LAKE MURKIN	3307 (106677)				3307 (106677)
NO. POINT	524 (17032)	3061 (98742)	828 (26710)	263 (8484)	4680 (150968)
POLIT	230 (7419)	204 (6645)	249 (8032)	123 (3968)	808 (26064)
TOTAL	4065 (131126)	3267 (105387)	1077 (34742)	386 (12452)	8795 (283709)
AMMONIA-NITROGEN					
LAKE MURKIN	140 (4516)				140 (4516)
NO. POINT	24 (774)	13 (419)	21 (677)	15 (484)	73 (2354)
POLIT	1213 (39129)	260 (8387)	480 (15484)	103 (3323)	2056 (66323)
TOTAL	1377 (44119)	273 (8806)	501 (16161)	118 (3807)	2269 (73193)
ORGANIC NITROGEN					
LAKE MURKIN	3307 (106677)				3307 (106677)
NO. POINT	163 (5240)	822 (26516)	284 (9161)	206 (6645)	1475 (47580)
POLIT	450 (14516)	81 (2613)	146 (4710)	44 (1419)	721 (23258)
TOTAL	3920 (126451)	903 (29129)	430 (13871)	250 (8064)	5503 (177515)
CHLORIDE					
LAKE MURKIN	88379 (2850935)				88379 (2850935)
NO. POINT	7296 (235355)	24803 (793645)	11734 (378516)	4472 (144258)	46105 (1551774)
POLIT	168702 (5442800)	5660 (182581)	10062 (324581)	2986 (96323)	187410 (6045485)
TOTAL	264377 (8528290)	30263 (976226)	21796 (703097)	7458 (240581)	323894 (10448194)
SILICA					
LAKE MURKIN	8017 (255613)				8017 (255613)
NO. POINT	1082 (34839)	3342 (107800)	1513 (48806)	784 (25290)	6719 (216741)
POLIT	637 (20540)	176 (5677)	314 (10129)	93 (3000)	1220 (39354)
TOTAL	9734 (314000)	3518 (113443)	1827 (58935)	877 (28290)	15956 (514708)

HASIN LOADINGS IN METRIC TONS PER MONTH FOR JUNE, 1977 (AVE DAILY LOADS IN KG/DAY)

	DETS/SLURP HASIN	WESTERN HASIN	CENTRAL HASIN	EASTERN HASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	103 (3433)				103 (3433)
COU. POINT	11 (367)				35 (1167)
POLIT	364 (12133)	4 (133)	8 (267)	12 (400)	583 (19433)
TOTAL	478 (15933)	58 (1933)	129 (4300)	32 (1067)	721 (24033)
ORTHOPHOSPHORUS					
LAKE MURPHY	44 (1600)				44 (1600)
COU. POINT	3 (100)				14 (467)
POLIT	147 (4900)	31 (1033)	66 (2200)	15 (500)	259 (8633)
TOTAL	198 (6600)	34 (1133)	72 (2400)	17 (567)	321 (10700)
NITRATE-NITRITE NITROGEN					
LAKE MURPHY	1214 (107267)				3214 (107267)
COU. POINT	119 (3967)				491 (16367)
POLIT	215 (7167)	125 (4167)	174 (5800)	73 (2433)	491 (16367)
TOTAL	3552 (118001)	195 (6500)	236 (7867)	118 (3933)	764 (25467)
		320 (10667)	410 (13667)	191 (6366)	4473 (149101)
AMMONIA NITROGEN					
LAKE MURPHY	137 (4567)				137 (4567)
COU. POINT	17 (567)				41 (1367)
POLIT	1166 (38467)	3 (100)	13 (433)	8 (267)	1677 (62567)
TOTAL	1320 (44001)	162 (5400)	452 (15067)	97 (3233)	2055 (68501)
ORGANIC NITROGEN					
LAKE MURPHY	3217 (107233)				3217 (107233)
COU. POINT	85 (2833)				314 (10466)
POLIT	431 (14367)	35 (1167)	64 (2133)	130 (4333)	643 (22767)
TOTAL	3733 (124433)	77 (2567)	133 (4433)	42 (1400)	4214 (140466)
CML/WINE					
LAKE MURPHY	85978 (2865933)				85978 (2865933)
COU. POINT	1714 (57267)				15048 (501600)
POLIT	162446 (5429533)	6000 (200000)	4618 (153933)	2712 (90400)	160949 (6032967)
TOTAL	250582 (8352733)	5477 (182567)	9737 (324567)	2889 (96300)	262015 (9400500)
		11477 (382567)	14355 (478500)	5601 (186700)	
SILICA					
LAKE MURPHY	7800 (260000)				7800 (260000)
COU. POINT	504 (16800)				1750 (58333)
POLIT	616 (20533)	289 (9633)	568 (18933)	389 (12967)	1181 (39366)
TOTAL	8920 (297333)	170 (5667)	304 (10133)	91 (3033)	10731 (357699)
		459 (15300)	872 (29066)	480 (16000)	

MAJOR LOADINGS IN METRIC TONS PER MONTH FOR JULY, 1977
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
DET/ST. CLK BASIN:				
TOTAL PHOSPHORUS				
LAKE MURDOCK	106 (3419)			106 (3419)
COO. POINT	16 (501)			16 (501)
PULIT	376 (12129)	97 (3129)	31 (1000)	621 (20033)
TOTAL	500 (16129)	103 (4613)	64 (2065)	912 (29420)
ORTHO PHOSPHORUS				
LAKE MURDOCK	50 (1613)			50 (1613)
COO. POINT	3 (129)			3 (1097)
PULIT	152 (4903)	16 (516)	2 (65)	277 (8935)
TOTAL	206 (6645)	73 (2355)	19 (613)	361 (11645)
NITRATE-NITRITE NITROGEN				
LAKE MURDOCK	3325 (107250)			3325 (107250)
COO. POINT	212 (6439)	1151 (37129)	216 (6968)	2599 (83839)
PULIT	227 (7323)	249 (8032)	123 (3968)	605 (25968)
TOTAL	3764 (121420)	1400 (45161)	339 (10936)	6729 (217065)
AMMONIA NITROGEN				
LAKE MURDOCK	141 (4500)			141 (4500)
COO. POINT	18 (581)			64 (2065)
PULIT	1207 (38935)	31 (1000)	14 (452)	1966 (63420)
TOTAL	1366 (44064)	479 (15452)	117 (3775)	2171 (70033)
ORGANIC NITROGEN				
LAKE MURDOCK	3324 (107226)			3324 (107226)
COO. POINT	96 (3161)	470 (15161)	194 (6419)	1005 (32418)
PULIT	400 (14452)	146 (4710)	44 (1419)	717 (23129)
TOTAL	3820 (124639)	616 (19871)	203 (7638)	5046 (162773)
CHLORIDE				
LAKE MURDOCK	8844 (2865935)			8844 (2865935)
COO. POINT	2487 (80226)	1449 (467710)	4137 (133452)	3176 (1005678)
PULIT	165403 (5335581)	10062 (324581)	2986 (96323)	164111 (5939066)
TOTAL	256134 (8261742)	24561 (792291)	7123 (229775)	304131 (9810679)
SILICA				
LAKE MURDOCK	8060 (260000)			8060 (260000)
COO. POINT	624 (20129)	2177 (70226)	803 (25903)	4802 (154903)
PULIT	637 (20500)	314 (10129)	93 (3000)	1220 (39354)
TOTAL	9321 (30677)	2491 (80355)	896 (26903)	14082 (454237)

WASTE LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1977
(AVE DAILY LOADS IN KG/DAY)

	WEST. CO. BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURKIN	106 (3419)	15 (484)	27 (871)	43 (1387)	106 (3419)
FOR POINT	11 (355)				96 (3097)
PURIT	374 (12065)	64 (2194)	154 (4968)	33 (1065)	629 (20292)
TOTAL	491 (15839)	79 (2678)	181 (5839)	76 (2452)	831 (26808)
ORTHOPHOSPHORUS					
LAKE MURKIN	50 (1613)	5 (161)	7 (226)	4 (129)	50 (1613)
FOR POINT	3 (97)				19 (613)
PURIT	151 (4971)	34 (1097)	75 (2419)	17 (548)	277 (8935)
TOTAL	204 (6581)	39 (1258)	82 (2645)	21 (677)	346 (11161)
NITRATE-NITRICE NITROGEN					
LAKE MURKIN	3325 (107258)	453 (14613)	369 (11903)	364 (11742)	3325 (107258)
FOR POINT	104 (3516)				1295 (41778)
PURIT	212 (6839)	206 (6645)	249 (8032)	123 (3968)	790 (25488)
TOTAL	3641 (117613)	659 (21258)	618 (19935)	487 (15710)	5410 (174516)
AMMONIA NITROGEN					
LAKE MURKIN	141 (4548)	1 (32)	20 (645)	23 (742)	141 (4548)
FOR POINT	16 (516)				60 (1935)
PURIT	1204 (38339)	159 (5129)	476 (15355)	104 (3355)	1943 (62678)
TOTAL	1361 (43403)	160 (5161)	496 (16000)	127 (4097)	2144 (69161)
ORGANIC NITROGEN					
LAKE MURKIN	3324 (107226)	148 (4774)	273 (8806)	323 (10419)	3324 (107226)
FOR POINT	75 (2419)				819 (26418)
PURIT	443 (14290)	77 (2484)	146 (4710)	84 (1419)	710 (22903)
TOTAL	3842 (123735)	225 (7258)	419 (13516)	367 (11838)	4853 (156547)
CHLORIDE					
LAKE MURKIN	4444 (2465935)				4444 (2465935)
FOR POINT	964 (31161)				25269 (815129)
PURIT	163052 (5281294)	5850 (182581)	13313 (429452)	5140 (165806)	182640 (5891614)
TOTAL	253742 (8155225)	11510 (371291)	23375 (754033)	8126 (262129)	296753 (9572678)
SILICA					
LAKE MURKIN	4059 (259964)				4059 (259964)
FOR POINT	448 (14452)				4111 (132614)
PURIT	657 (20544)	176 (5677)	314 (10129)	93 (3000)	1220 (39354)
TOTAL	9144 (294964)	449 (14677)	2002 (64581)	1355 (43710)	13390 (431936)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1977
(AVE DAILY LOADS IN KG/DAY)

	DE/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDOCK	101 (3367)	107 (3567)	95 (3167)	324 (10800)	101 (3367)
LAKE POINT	101 (3367)	68 (2267)	143 (4767)	32 (1067)	627 (20901)
POLY-T	305 (12167)	175 (5834)	238 (7934)	356 (11867)	608 (20268)
TOTAL	507 (16901)				1336 (44536)
ORTHO PHOSPHORUS					
LAKE MURDOCK	47 (1567)	29 (967)	23 (767)	19 (633)	47 (1567)
LAKE POINT	22 (733)	35 (1167)	71 (2367)	16 (533)	93 (3100)
POLY-T	144 (4933)	64 (2134)	94 (3134)	35 (1166)	270 (9000)
TOTAL	217 (7233)				410 (13667)
NITRATE-NITRITE NITROGEN					
LAKE MURDOCK	3167 (105567)	2276 (75867)	1049 (34967)	1090 (36333)	3167 (105567)
LAKE POINT	819 (27300)	199 (6633)	241 (8033)	119 (3967)	5234 (174467)
POLY-T	223 (7433)	2475 (82500)	1290 (43000)	1209 (40300)	762 (26066)
TOTAL	4209 (140300)				9163 (306100)
AMMONIA NITROGEN					
LAKE MURDOCK	134 (4467)	7 (233)	38 (1267)	36 (1200)	134 (4467)
LAKE POINT	28 (933)	144 (4767)	464 (15467)	123 (4100)	109 (3633)
POLY-T	1195 (39833)	195 (6500)	502 (16734)	159 (5300)	1970 (65667)
TOTAL	1357 (45233)				2213 (73767)
ORGANIC NITROGEN					
LAKE MURDOCK	3166 (105533)	512 (17067)	404 (13467)	660 (22000)	3166 (105533)
LAKE POINT	281 (9367)	76 (2533)	141 (4700)	42 (1400)	1857 (61901)
POLY-T	434 (14467)	588 (19600)	545 (18167)	702 (23400)	693 (23100)
TOTAL	3881 (129567)				5716 (190534)
CHLORIDE					
LAKE MURDOCK	84628 (2820933)	15797 (526567)	15510 (517000)	11675 (389167)	84628 (2820933)
LAKE POINT	10815 (360500)	5077 (182567)	4737 (324567)	2889 (96300)	53797 (1793234)
POLY-T	163260 (5442000)	21274 (704134)	25247 (841567)	14564 (485467)	181363 (6045434)
TOTAL	258703 (8623433)				319706 (10659601)
SILICA					
LAKE MURDOCK	7677 (255900)	2324 (77467)	2473 (82433)	2464 (98800)	7677 (255900)
LAKE POINT	1640 (54667)	170 (5667)	304 (10133)	91 (3033)	9401 (313367)
POLY-T	616 (20533)	2494 (83134)	2777 (92566)	3055 (101633)	1181 (39366)
TOTAL	9933 (331100)				18259 (608633)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1977
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	104 (3355)				104 (3355)
FOU. POINT	138 (4452)	13 (419)	43 (1387)	162 (5226)	356 (11484)
POINT	379 (12220)	71 (2290)	139 (4484)	33 (1065)	622 (20065)
TOTAL	621 (20033)	84 (2709)	182 (5871)	195 (6291)	1082 (34904)
UNITED PHOSPHORUS					
LAKE MURPHY	49 (1581)				49 (1581)
FOU. POINT	50 (904)	8 (258)	18 (581)	28 (903)	84 (2710)
POINT	154 (4988)	37 (1190)	71 (2290)	17 (548)	279 (9000)
TOTAL	233 (7517)	45 (1452)	89 (2871)	45 (1451)	412 (13291)
NITRATE-NITRITE NITROGEN					
LAKE MURPHY	3273 (105581)				3273 (105581)
FOU. POINT	1272 (41032)	409 (13194)	341 (11000)	1201 (38742)	3223 (103968)
POINT	231 (7452)	206 (6645)	243 (7839)	123 (3968)	603 (25904)
TOTAL	4776 (154065)	615 (19839)	584 (18839)	1324 (42710)	7299 (235453)
AMMONIA NITROGEN					
LAKE MURPHY	139 (4484)				139 (4484)
FOU. POINT	34 (1097)	2 (65)	21 (677)	39 (1258)	96 (3097)
POINT	1240 (40129)	172 (5548)	474 (15290)	143 (4613)	2033 (65580)
TOTAL	1417 (45710)	174 (5613)	495 (15967)	182 (5871)	2268 (73161)
ORGANIC NITROGEN					
LAKE MURPHY	3272 (105548)				3272 (105548)
FOU. POINT	513 (16548)	114 (3677)	191 (6161)	437 (14097)	1255 (40483)
POINT	450 (14516)	79 (2548)	145 (4677)	44 (1419)	718 (23160)
TOTAL	4235 (136612)	193 (6225)	336 (10838)	481 (15516)	5245 (169191)
CHLORIDE					
LAKE MURPHY	87449 (2820935)				87449 (2820935)
FOU. POINT	17781 (573581)	8540 (275484)	10066 (328710)	15917 (513452)	52304 (1687227)
POINT	165076 (5325032)	5660 (182581)	10047 (324097)	2986 (96323)	183769 (5928033)
TOTAL	270306 (8719548)	14200 (458065)	20113 (648607)	18903 (609775)	323522 (10436195)
SILICA					
LAKE MURPHY	7933 (255903)				7933 (255903)
FOU. POINT	2504 (80774)	740 (23871)	1266 (40839)	2676 (86323)	7146 (231807)
POINT	637 (20548)	176 (5677)	314 (10124)	93 (3000)	1220 (39354)
TOTAL	11074 (357225)	916 (29548)	1580 (50968)	2769 (89323)	16334 (527068)

POST-LOADINGS IN METRIC TONS PER MILE² FOR NOVEMBER, 1977
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURDO	95 (3167)			95 (3167)
LOW POINT	141 (4700)	89 (2967)	126 (4200)	372 (12400)
FOUNT	368 (12267)	151 (5033)	32 (1067)	622 (20734)
TOTAL	604 (20134)	240 (8000)	158 (5267)	1089 (36301)
ORTHOPHOSPHORUS				
LAKE MURDO	45 (1500)			45 (1500)
LOW POINT	36 (1200)	22 (733)	20 (667)	88 (2933)
FOUNT	144 (4667)	75 (2500)	16 (533)	277 (9233)
TOTAL	230 (7667)	97 (3233)	36 (1200)	410 (13666)
NITRATE-NITRILE NITROGEN				
LAKE MURDO	2472 (99067)			2472 (99067)
LOW POINT	2631 (87700)	674 (22467)	993 (33100)	4171 (139034)
FOUNT	224 (7467)	241 (8033)	119 (3967)	783 (26100)
TOTAL	5227 (174234)	915 (30500)	1112 (37067)	7426 (264201)
AMMONIA NITROGEN				
LAKE MURDO	126 (4200)			126 (4200)
LOW POINT	45 (1500)	47 (1567)	25 (833)	121 (4033)
FOUNT	1205 (40167)	464 (15467)	135 (4500)	1985 (66167)
TOTAL	1376 (45467)	511 (17034)	160 (5333)	2232 (74400)
ORGANIC NITROGEN				
LAKE MURDO	2971 (99033)			2971 (99033)
LOW POINT	434 (14467)	503 (16767)	442 (14733)	1517 (50567)
FOUNT	435 (14500)	141 (4700)	42 (1400)	696 (23200)
TOTAL	3840 (128000)	644 (21467)	484 (16133)	5184 (172800)
CHLORIDE				
LAKE MURDO	79406 (2646667)			79406 (2646667)
LOW POINT	21650 (721667)	35352 (1178400)	12160 (405333)	11346 (3711533)
FOUNT	163260 (5442000)	9737 (324567)	2889 (96300)	181363 (6045434)
TOTAL	264316 (8610534)	45089 (1502967)	15049 (501633)	342115 (11603634)
SILICA				
LAKE MURDO	7203 (240100)			7203 (240100)
LOW POINT	2754 (91800)	2997 (99900)	2392 (79733)	9092 (303066)
FOUNT	816 (20533)	304 (10133)	91 (3033)	1181 (39366)
TOTAL	10573 (352433)	3301 (110033)	2483 (82766)	17476 (582532)

LAKE E. LOADINGS IN METRIC TONS PER MONTH FOR DECEMBER, 1977
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR PPT	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURDER	101 (3258)				101 (3258)
FOA PCT	500 (18665)	2613 (84290)	1149 (37710)	285 (9194)	4627 (149259)
POINT	380 (12256)	76 (2452)	159 (5129)	33 (1065)	648 (20904)
TOTAL	1001 (33581)	2689 (86742)	1328 (42839)	318 (10259)	5376 (173421)
ORTHOPHOSPHORUS					
LAKE MURDER	47 (1516)				47 (1516)
FOA PCT	145 (4842)	217 (7000)	206 (6645)	30 (968)	578 (18645)
POINT	157 (5065)	38 (1226)	79 (2547)	17 (548)	291 (9387)
TOTAL	324 (10613)	255 (8226)	285 (9193)	47 (1516)	916 (29548)
NITRATE-NITRITE NITROGEN					
LAKE MURDER	3168 (102194)				3168 (102194)
FOA PCT	5634 (181742)	16074 (518516)	6875 (221774)	1582 (51032)	30165 (973064)
POINT	231 (7452)	206 (6645)	249 (8032)	123 (3968)	809 (26097)
TOTAL	9033 (291344)	16280 (525161)	7124 (229806)	1705 (55000)	34142 (1101355)
AMMONIA NITROGEN					
LAKE MURDER	135 (4355)				135 (4355)
FOA PCT	289 (9373)	374 (12065)	441 (14226)	61 (1968)	1165 (37582)
POINT	1253 (40419)	293 (9452)	499 (16097)	144 (4645)	2189 (70613)
TOTAL	1677 (54097)	667 (21517)	940 (30323)	205 (6613)	3489 (1125501)
ORGANIC NITROGEN					
LAKE MURDER	3168 (102194)				3168 (102194)
FOA PCT	2685 (86613)	7996 (257935)	3165 (102097)	706 (22774)	14552 (469419)
POINT	450 (14516)	43 (2677)	146 (4710)	44 (1419)	723 (23322)
TOTAL	6303 (203323)	8079 (260612)	3311 (106807)	750 (24193)	18443 (594935)
CHLORIDE					
LAKE MURDER	84658 (2730903)				84658 (2730903)
FOA PCT	59073 (1905581)	74906 (2416323)	168380 (5431613)	18943 (611065)	321302 (10364582)
POINT	168702 (5442000)	5660 (182581)	10062 (324581)	2986 (96323)	187410 (6045485)
TOTAL	312433 (10078484)	80566 (2598904)	178442 (5756194)	21929 (707388)	593370 (19140970)
SILICA					
LAKE MURDER	7680 (247742)				7680 (247742)
FOA PCT	7127 (229903)	13361 (431645)	14709 (474484)	3893 (125581)	39110 (1261613)
POINT	637 (20544)	174 (5677)	314 (10129)	93 (3000)	1220 (39354)
TOTAL	15444 (498193)	13557 (437322)	15023 (484613)	3986 (128581)	48010 (1548709)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JANUARY, 1978
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	130 (4194)	20 (645)	263 (8484)	34 (1097)	130 (4194)
MON POINT	36 (1161)	70 (2258)	241 (7774)	29 (935)	353 (11367)
POINT	272 (8774)	90 (2903)	504 (16258)	63 (2032)	612 (19741)
TOTAL	438 (14129)				1095 (35322)
ORTHOPHOSPHORUS					
LAKE MURUM	53 (1710)	10 (323)	45 (1452)	0 (250)	53 (1710)
MON POINT	10 (323)	35 (1129)	121 (3903)	15 (484)	73 (2356)
POINT	128 (4129)	45 (1452)	166 (5355)	23 (742)	299 (9645)
TOTAL	191 (6162)				425 (13711)
NITRATE-NITRICE NITROGEN					
LAKE MURUM	3510 (113226)	701 (22613)	1918 (61871)	619 (19968)	3510 (113226)
MON POINT	541 (17774)	190 (6129)	271 (8742)	114 (3677)	3789 (122226)
POINT	937 (30226)	891 (28742)	2189 (70613)	733 (23645)	1512 (48774)
TOTAL	4998 (161226)				8811 (284226)
AMMONIA NITROGEN					
LAKE MURUM	143 (4613)	3 (97)	52 (1677)	21 (677)	143 (4613)
MON POINT	4 (129)	226 (7290)	486 (15677)	110 (3548)	80 (2580)
POINT	1171 (37774)	229 (7387)	538 (17354)	131 (4225)	1993 (64289)
TOTAL	1316 (42516)				2216 (71482)
ORGANIC NITROGEN					
LAKE MURUM	3513 (113323)	309 (9968)	1257 (40548)	213 (6871)	3513 (113323)
MON POINT	100 (3226)	75 (2419)	155 (5000)	40 (1290)	1879 (60613)
POINT	654 (21097)	384 (12387)	1412 (45548)	253 (8161)	924 (29806)
TOTAL	4267 (137646)				6316 (203742)
CHLORIDE					
LAKE MURUM	81027 (2613774)	13556 (437290)	30204 (974323)	7014 (226258)	81027 (2613774)
MON POINT	9206 (296968)	5622 (181355)	10648 (343484)	2762 (89097)	59980 (1934839)
POINT	168257 (5294613)	19178 (618645)	40652 (1317807)	9776 (315355)	183289 (5912549)
TOTAL	254490 (8209355)				324296 (10461162)
SILICA					
LAKE MURUM	6713 (216588)	1327 (42806)	4621 (149065)	1259 (40613)	6713 (216588)
MON POINT	739 (23839)	174 (5613)	533 (17442)	86 (2774)	7946 (256323)
POINT	1322 (42645)	1501 (48419)	4954 (159807)	1345 (43367)	1915 (61774)
TOTAL	8774 (283032)				16574 (534645)

HAZARDOUS LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1978 (AVE DAILY LOADS IN KG/DAY)

	UP/ST. CLER BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	109 (3893)	1 (36)	56 (2000)	13 (464)	109 (3893)
MON. POINT	52 (1743)	55 (1964)	214 (7633)	27 (964)	302 (10540)
POINT	217 (8021)	56 (2000)	270 (9643)	40 (1428)	543 (19392)
TOTAL	378 (13857)				754 (26928)
ORTHOPHOSPHORUS					
LAKE HURON	44 (1571)	1 (36)	15 (536)	4 (143)	44 (1571)
MON. POINT	8 (286)	25 (893)	105 (3750)	13 (464)	259 (9250)
POINT	116 (4143)	26 (929)	120 (4286)	17 (607)	331 (11822)
TOTAL	168 (6006)				
NITRATE-NITRIF NITROGEN					
LAKE HURON	2941 (105036)	196 (7000)	744 (26571)	351 (12536)	2941 (105036)
MON. POINT	424 (15286)	172 (6143)	245 (8750)	103 (3679)	1719 (61393)
POINT	444 (15945)	368 (13143)	499 (17821)	454 (16215)	1364 (48715)
TOTAL	4213 (150465)				6024 (215144)
AMMONIA NITROGEN					
LAKE HURON	120 (4246)	0 (0)	10 (357)	12 (429)	120 (4246)
MON. POINT	2 (71)	149 (5321)	438 (15643)	91 (3250)	742 (26500)
POINT	1056 (37714)	149 (5321)	448 (16000)	103 (3679)	1734 (61928)
TOTAL	1178 (42071)				1878 (67071)
ORGANIC NITROGEN					
LAKE HURON	2944 (105143)	182 (6500)	371 (13250)	113 (4036)	2944 (105143)
MON. POINT	76 (2714)	68 (2429)	140 (5000)	36 (1286)	742 (26500)
POINT	589 (21036)	250 (8929)	511 (18250)	149 (5322)	833 (29751)
TOTAL	3609 (128893)				4519 (161394)
CHLORIDE					
LAKE HURON	67901 (2425036)	7840 (280000)	11971 (427536)	4786 (170929)	67901 (2425036)
MON. POINT	7378 (263500)	5078 (181557)	9618 (343500)	2495 (89107)	31975 (1141965)
POINT	147134 (5254786)	12918 (461357)	21589 (771036)	7281 (260036)	164325 (5868750)
TOTAL	222413 (7943322)				264201 (9435751)
SILICA					
LAKE HURON	5625 (200893)	413 (14750)	1705 (60893)	632 (22571)	5625 (200893)
MON. POINT	584 (20857)	158 (5643)	301 (10750)	78 (2786)	3334 (119071)
POINT	1180 (42143)	571 (20393)	2006 (71643)	710 (25357)	1717 (61322)
TOTAL	7389 (263893)				10676 (381286)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH, 1978
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	123 (3968)	1280 (41290)	1507 (49903)	123 (3968)	123 (3968)
ADN. POINT	315 (10161)	74 (2387)	201 (7774)	29 (935)	3265 (105322)
POINT	273 (8806)	1354 (43677)	1708 (57677)	152 (4903)	617 (19902)
TOTAL	711 (22935)				4005 (129192)
ORTHOPHOSPHORUS					
LAKE MURPHY	50 (1613)	324 (10452)	217 (7000)	17 (508)	50 (1613)
ADN. POINT	120 (3871)	36 (1161)	121 (3903)	15 (484)	678 (21871)
POINT	129 (4161)	360 (11613)	338 (10903)	32 (1032)	301 (9709)
TOTAL	299 (9645)				1029 (33193)
NITRATE-NITRITE NITROGEN					
LAKE MURPHY	3335 (107581)	11449 (369323)	7808 (251871)	1187 (38290)	3335 (107581)
ADN. POINT	4001 (129065)	190 (6129)	271 (8742)	114 (3677)	2445 (788549)
POINT	1044 (33677)	11639 (375452)	8079 (260615)	1501 (41967)	1619 (52225)
TOTAL	8380 (270323)				29399 (948355)
AMMONIA NITROGEN					
LAKE MURPHY	136 (4387)	1007 (32484)	412 (13290)	32 (1032)	136 (4387)
ADN. POINT	183 (5903)	284 (9161)	498 (16065)	113 (3645)	1634 (52709)
POINT	1259 (40613)	1291 (41645)	910 (29355)	145 (4677)	2154 (69484)
TOTAL	1578 (50983)				3924 (126580)
ORGANIC NITROGEN					
LAKE MURPHY	3337 (107645)	4209 (135774)	6016 (194065)	560 (18065)	3337 (107645)
ADN. POINT	1289 (41581)	84 (2710)	155 (5000)	40 (1290)	12074 (389485)
POINT	752 (24258)	4293 (138484)	6171 (199065)	600 (19355)	1031 (33258)
TOTAL	5378 (173484)				16442 (530388)
CHLORIDE					
LAKE MURPHY	76976 (2483097)	73644 (2375613)	74517 (2403774)	9736 (314065)	76976 (2483097)
ADN. POINT	85099 (2745129)	5622 (181355)	10648 (343484)	2762 (89097)	242996 (7838581)
POINT	167358 (5398635)	79266 (2556468)	85165 (2747258)	12498 (403162)	186190 (6012581)
TOTAL	329433 (10426871)				506362 (16334259)
SILICA					
LAKE MURPHY	6377 (205710)	16166 (521484)	13431 (433258)	2320 (78839)	6377 (205710)
ADN. POINT	7467 (240871)	174 (5613)	333 (10742)	86 (2774)	39384 (1270452)
POINT	1509 (43516)	16340 (527097)	13764 (444000)	2406 (77613)	1942 (62645)
TOTAL	15193 (490007)				47703 (1538807)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR APRIL , 1978
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	126 (4200)	747 (24900)	355 (11433)	325 (10833)	126 (4200)
WON POINT	363 (12100)	73 (2433)	233 (7767)	29 (947)	1790 (59666)
POINT	265 (8433)	820 (27333)	598 (19600)	354 (11800)	600 (20000)
TOTAL	754 (25133)				2516 (83866)
ORTHOPHOSPHORUS					
LAKE MURUM	51 (1700)	200 (6667)	91 (3033)	63 (2100)	51 (1700)
WON POINT	152 (5067)	35 (1167)	117 (3900)	15 (500)	506 (16867)
POINT	125 (4167)	235 (7834)	208 (6933)	78 (2600)	292 (9734)
TOTAL	328 (10934)				849 (28301)
NITRATE-NITRIF NITROGEN					
LAKE MURUM	3416 (113467)	9393 (313100)	3348 (111600)	2531 (84367)	3416 (113067)
WON POINT	5223 (174100)	184 (6133)	263 (8767)	110 (3667)	20495 (683167)
POINT	948 (31600)	9577 (319233)	3611 (120367)	2641 (88034)	1505 (50167)
TOTAL	4547 (319547)				25416 (847201)
AMMONIA NITROGEN					
LAKE MURUM	139 (4633)	693 (23100)	153 (5100)	148 (4933)	139 (4633)
WON POINT	306 (10200)	306 (10200)	477 (15900)	126 (4267)	1300 (43333)
POINT	1215 (40500)	999 (33300)	630 (21000)	276 (9200)	2126 (70867)
TOTAL	1660 (55333)				3565 (118033)
ORGANIC NITROGEN					
LAKE MURUM	3416 (113933)	2538 (84600)	1431 (47700)	1112 (37067)	3416 (113933)
WON POINT	1608 (53600)	81 (2700)	150 (5000)	39 (1300)	6689 (222967)
POINT	674 (22467)	2619 (87300)	1541 (52700)	1151 (38367)	944 (31467)
TOTAL	5700 (190000)				11051 (368367)
CHLORIDE					
LAKE MURUM	78850 (2628333)	71697 (2389900)	41157 (1371900)	18813 (627100)	78850 (2628333)
WON POINT	65753 (2191767)	5441 (181367)	10305 (343500)	2672 (89067)	197420 (6580667)
POINT	161959 (5398633)	77138 (2571267)	51462 (1715400)	21485 (716167)	180377 (6012567)
TOTAL	306562 (10218733)				456647 (15221567)
SILICA					
LAKE MURUM	6532 (217733)	13911 (4637800)	6393 (213100)	3392 (113067)	6532 (217733)
WON POINT	9580 (318000)	169 (5633)	372 (10733)	83 (2767)	33236 (1107867)
POINT	1306 (43533)	18080 (609333)	6715 (223033)	3475 (115034)	1880 (62666)
TOTAL	17378 (579266)				41648 (1388266)

WASTEWATER LOADINGS IN METRIC TONS PER MONTH FOR MAY, 1978
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	138 (4452)				138 (4452)
DOWN POINT	63 (2032)	99 (3194)	115 (3710)	43 (1387)	320 (10323)
TOTAL	273 (8806)	72 (2323)	241 (7774)	29 (935)	615 (19838)
	474 (15290)	171 (5517)	356 (11484)	72 (2322)	1073 (34613)
ORTHOPHOSPHORUS					
LAKE MURPHY	56 (1806)				56 (1806)
DOWN POINT	27 (871)	50 (1613)	32 (1032)	14 (452)	123 (3968)
TOTAL	129 (4161)	36 (1161)	120 (3871)	15 (484)	300 (9677)
	212 (6838)	86 (2774)	152 (4903)	29 (936)	479 (15451)
NITRATE-NITRITE-NITROGEN					
LAKE MURPHY	3744 (120774)				3744 (120774)
DOWN POINT	1110 (35406)	1905 (61452)	1221 (39387)	885 (28548)	5121 (165193)
TOTAL	945 (31129)	190 (6129)	271 (8782)	114 (3677)	1540 (49677)
	5419 (187789)	2095 (67581)	1492 (48129)	999 (32225)	10405 (335844)
AMMONIA-NITROGEN					
LAKE MURPHY	153 (4935)				153 (4935)
DOWN POINT	13 (419)	148 (4774)	18 (581)	21 (677)	200 (6451)
TOTAL	1192 (38452)	286 (9226)	485 (15645)	119 (3839)	2082 (67162)
	1356 (43806)	434 (14000)	503 (16226)	140 (4516)	2435 (78568)
ORGANIC NITROGEN					
LAKE MURPHY	3747 (120871)				3747 (120871)
DOWN POINT	240 (7782)	529 (17065)	653 (21065)	284 (9161)	1706 (55033)
TOTAL	674 (21903)	81 (2613)	155 (5000)	40 (1290)	955 (30806)
	4060 (150516)	610 (19678)	808 (26065)	324 (10451)	6408 (206710)
CHLORIDE					
LAKE MURPHY	86430 (2788065)				86430 (2788065)
DOWN POINT	27455 (901774)	29290 (948839)	24379 (786419)	8668 (279613)	90292 (2912645)
TOTAL	167356 (5388045)	5622 (181355)	10648 (343484)	2762 (89097)	186390 (6012581)
	281743 (9088444)	34912 (1126194)	35027 (1129903)	11430 (368710)	363112 (11713291)
SILICA					
LAKE MURPHY	7160 (230968)				7160 (230968)
DOWN POINT	1700 (56129)	3407 (109903)	3232 (104250)	1435 (46290)	9814 (316580)
TOTAL	1349 (43516)	174 (5613)	333 (10742)	86 (2774)	1942 (62645)
	10249 (330613)	3581 (115516)	3565 (115000)	1521 (49064)	18916 (610193)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR
(AVE DAILY LOADS IN KG/DAY) JUNE , 1978

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
DET/ST. CLP BASIN				
TOTAL PHOSPHORUS				
LAKE MURPHY	134 (4467)	12 (400)	10 (333)	134 (4467)
DOWN POINT	26 (867)	223 (7433)	29 (967)	98 (3267)
POINT	264 (8900)	235 (7833)	39 (1300)	584 (19467)
TOTAL	424 (14134)			816 (27201)
ORTHOPHOSPHORUS				
LAKE MURPHY	55 (1833)	5 (167)	1 (33)	55 (1833)
DOWN POINT	8 (267)	110 (3667)	14 (467)	29 (967)
POINT	124 (4133)	115 (3834)	15 (500)	242 (9400)
TOTAL	187 (6233)			366 (12200)
NITRATE-NITRICE NITROGEN				
LAKE MURPHY	3623 (120767)	393 (13100)	195 (6500)	3623 (120767)
DOWN POINT	168 (5600)	263 (8767)	110 (3667)	1898 (63267)
POINT	911 (30367)	656 (21867)	305 (10167)	1468 (48934)
TOTAL	4702 (156734)			6989 (232968)
AMMONIA NITROGEN				
LAKE MURPHY	148 (4933)	5 (167)	7 (233)	148 (4933)
DOWN POINT	2 (67)	463 (15433)	91 (3033)	16 (534)
POINT	1127 (37567)	468 (15600)	98 (3266)	1894 (63133)
TOTAL	1277 (42567)			2058 (68600)
ORGANIC NITROGEN				
LAKE MURPHY	3626 (120767)	175 (5833)	86 (2867)	3626 (120767)
DOWN POINT	44 (1467)	150 (5000)	39 (1300)	672 (22400)
POINT	639 (21300)	325 (10833)	125 (4167)	900 (30000)
TOTAL	4309 (143634)			5198 (173267)
CHLORIDE				
LAKE MURPHY	83642 (278867)	7541 (252033)	3525 (117500)	83642 (278867)
DOWN POINT	7798 (261267)	10305 (343500)	2672 (89067)	32862 (1095400)
POINT	161647 (538233)	17866 (595533)	6197 (206367)	180065 (6002167)
TOTAL	254087 (8409567)			296549 (9885834)
SILICA				
LAKE MURPHY	6929 (230967)	919 (30633)	386 (12867)	6929 (230967)
DOWN POINT	380 (12933)	322 (10733)	43 (1467)	3302 (110663)
POINT	1306 (43533)	1241 (41366)	469 (15834)	1880 (62666)
TOTAL	8623 (287433)			12111 (403699)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JULY, 1978
(AVE DAILY LOADS IN KG/DAY)

	DE/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	143 (4613)	54 (1742)	4 (129)	13 (419)	143 (4613)
WDA POINT	22 (710)	69 (2226)	224 (7226)	29 (935)	93 (3000)
POINT	266 (8581)	123 (3968)	228 (7355)	42 (1354)	588 (18968)
TOTAL	431 (13904)				824 (26581)
ORTHO PHOSPHORUS					
LAKE MURON	54 (1871)	25 (806)	1 (32)	0 (0)	58 (1871)
WDA POINT	5 (161)	34 (1097)	111 (3581)	15 (484)	31 (999)
POINT	126 (4065)	59 (1903)	112 (3613)	15 (484)	286 (9227)
TOTAL	189 (6097)				375 (12097)
NITRATE-NITRITE NITROGEN					
LAKE MURON	1861 (124548)	1048 (33806)	150 (4839)	76 (2452)	3861 (124548)
WDA POINT	10 (323)	190 (6129)	271 (8742)	114 (3677)	1284 (41420)
POINT	484 (28516)	1218 (39835)	421 (13581)	190 (6129)	1459 (47064)
TOTAL	4755 (153387)				6604 (213032)
AMMONIA NITROGEN					
LAKE MURON	157 (5065)	60 (1935)	3 (97)	5 (161)	157 (5065)
WDA POINT	1 (32)	235 (7581)	475 (15323)	92 (2988)	69 (2225)
POINT	1150 (37355)	295 (9516)	478 (15420)	97 (3129)	1960 (63227)
TOTAL	1316 (42452)				2186 (70517)
ORGANIC NITROGEN					
LAKE MURON	3454 (124645)	367 (11839)	109 (3516)	81 (2613)	3864 (124645)
WDA POINT	8 (256)	72 (2323)	153 (4935)	40 (1290)	565 (18226)
POINT	644 (20774)	434 (14162)	262 (8451)	121 (3903)	909 (29322)
TOTAL	4516 (145677)				5338 (172193)
CHLORIDE					
LAKE MURON	89130 (2875161)	13230 (426774)	5343 (172355)	2368 (76387)	89130 (2875161)
WDA POINT	1070 (34516)	5622 (181554)	10648 (343484)	2762 (89097)	22011 (710032)
POINT	161974 (5225774)	18652 (608124)	15991 (515639)	5110 (165484)	181031 (5839710)
TOTAL	252194 (8135451)				292172 (9424901)
SILICA					
LAKE MURON	7344 (236194)	1937 (62484)	593 (19124)	201 (6484)	7384 (236194)
WDA POINT	100 (3226)	174 (5615)	333 (10742)	86 (2774)	2831 (91323)
POINT	1272 (41032)	2111 (68097)	426 (29471)	287 (9256)	1865 (60161)
TOTAL	8756 (282452)				12080 (389678)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1978
(AVE DAILY LOADS IN KG/DAY)

	OUT/ST. CLP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKF MURJN	144 (4645)				144 (4645)
WON. POINT	22 (710)	1 (32)	3 (97)	13 (419)	39 (1258)
POINT	265 (8522)	51 (1645)	217 (7000)	29 (935)	562 (18128)
TOTAL	431 (13903)	52 (1677)	220 (7097)	42 (1354)	745 (24031)
ORTHOPHOSPHORUS					
LAKF MURJN	59 (1903)				59 (1903)
WON. POINT	5 (161)	0 (0)	1 (32)	0 (0)	6 (193)
POINT	125 (4032)	24 (774)	107 (3452)	14 (452)	270 (8710)
TOTAL	189 (6096)	24 (774)	108 (3484)	14 (452)	335 (10806)
NITRATE-NITRITE NITROGEN					
LAKF MURJN	3900 (125806)				3900 (125806)
WON. POINT	5 (161)	25 (806)	115 (3710)	87 (2806)	232 (7483)
POINT	875 (28226)	179 (5774)	262 (8452)	114 (3677)	1430 (46129)
TOTAL	8780 (151193)	204 (6580)	377 (12162)	201 (6483)	5562 (179418)
AMMONIA NITROGEN					
LAKF MURJN	159 (5129)				159 (5129)
WON. POINT	0 (0)	1 (32)	3 (97)	4 (129)	8 (258)
POINT	1156 (37290)	138 (4452)	469 (15129)	99 (3194)	1862 (60085)
TOTAL	1315 (42419)	139 (4484)	472 (15226)	103 (3323)	2029 (65452)
ORGANIC NITROGEN					
LAKF MURJN	3903 (125903)				3903 (125903)
WON. POINT	6 (194)	78 (2516)	68 (2194)	70 (2258)	222 (7162)
POINT	639 (20613)	71 (2290)	153 (4935)	40 (1290)	903 (29128)
TOTAL	4548 (146710)	149 (4806)	221 (7129)	110 (3548)	5028 (162193)
CHLORIDE					
LAKF MURJN	90031 (2904226)				90031 (2904226)
WON. POINT	517 (16677)	2273 (73323)	3542 (115548)	2210 (71290)	8582 (276838)
POINT	161554 (5211419)	5622 (181355)	10577 (341194)	2762 (89097)	180515 (5823065)
TOTAL	252102 (8132322)	7895 (254678)	14159 (456782)	4972 (160387)	279128 (9004128)
SILICA					
LAKF MURJN	7459 (240613)				7459 (240613)
WON. POINT	76 (2452)	126 (4065)	442 (15548)	200 (6452)	884 (28517)
POINT	1263 (40742)	174 (5613)	333 (10742)	86 (2774)	1856 (59871)
TOTAL	8798 (283807)	300 (9678)	815 (26290)	286 (9226)	10199 (329001)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1978
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
DEPT/ST. CLR BASIN				
TOTAL PHOSPHORUS				
LAKE MURPHY	180 (4667)			180 (4667)
ACKN POINT	24 (800)			24 (800)
POINT	263 (8767)	4 (133)	15 (500)	44 (1466)
TOTAL	467 (14234)	201 (6700)	29 (967)	538 (17934)
		205 (6833)	44 (1467)	722 (24067)
ORTHOPHOSPHORUS				
LAKE MURPHY	57 (1900)			57 (1900)
ACKN POINT	7 (233)			7 (233)
POINT	124 (4133)	2 (67)	2 (67)	12 (400)
TOTAL	188 (6260)	94 (3300)	15 (500)	259 (8633)
		101 (3367)	17 (567)	328 (10933)
NITRATE-NITRIFIC NITROGEN				
LAKE MURPHY	3793 (126433)			3793 (126433)
ACKN POINT	162 (5400)			162 (5400)
POINT	903 (30100)	51 (1700)	272 (9067)	520 (17334)
TOTAL	4858 (161933)	213 (7100)	110 (3667)	1351 (45034)
		264 (8800)	582 (12734)	5664 (188801)
AMMONIA NITROGEN				
LAKE MURPHY	155 (5167)			155 (5167)
ACKN POINT	1 (33)			1 (33)
POINT	129 (4300)	4 (133)	7 (233)	13 (432)
TOTAL	1294 (42800)	447 (14900)	107 (3567)	1811 (60367)
		451 (15033)	114 (3800)	1979 (65966)
ORGANIC NITROGEN				
LAKE MURPHY	3796 (126533)			3796 (126533)
ACKN POINT	36 (1200)			36 (1200)
POINT	631 (21033)	37 (1233)	96 (3200)	194 (6466)
TOTAL	4463 (147766)	143 (4767)	39 (1300)	881 (29367)
		180 (6000)	135 (4500)	4871 (162366)
CHLORIDE				
LAKE MURPHY	87562 (2918733)			87562 (2918733)
ACKN POINT	3731 (124367)			3731 (124367)
POINT	159337 (5311233)	1356 (45200)	3859 (128633)	11139 (371300)
TOTAL	250630 (8354333)	10083 (336100)	2672 (89067)	176953 (5898433)
		11439 (381300)	6531 (217700)	275654 (9188466)
SILICA				
LAKE MURPHY	7254 (241800)			7254 (241800)
ACKN POINT	360 (12000)			360 (12000)
POINT	1264 (42300)	236 (7867)	428 (14267)	1138 (37934)
TOTAL	8883 (296100)	321 (10700)	83 (2767)	1810 (60334)
		557 (18567)	511 (17034)	10202 (340068)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1978
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MUPON	147 (4742)				147 (4742)
MON POINT	29 (435)	1 (32)	6 (194)	15 (484)	51 (1645)
POINT	271 (4742)	45 (1452)	222 (7161)	29 (935)	567 (18290)
TOTAL	447 (14414)	46 (1484)	228 (7355)	44 (1419)	765 (24677)
ORTHOPHOSPHORUS					
LAKE MUPON	60 (1935)				60 (1935)
MON POINT	10 (323)	1 (32)	3 (97)	2 (65)	16 (517)
POINT	128 (4129)	22 (710)	109 (3516)	15 (484)	274 (8839)
TOTAL	198 (6387)	23 (742)	112 (3613)	17 (549)	350 (11291)
NITRATE-NITRIF NITROGEN					
LAKE MUPON	3978 (128323)				3978 (128323)
MON POINT	269 (8677)	48 (1548)	122 (3935)	301 (9710)	740 (23870)
POINT	934 (30129)	121 (3903)	261 (8419)	114 (3677)	1430 (46128)
TOTAL	5181 (167129)	169 (5451)	383 (12354)	415 (13387)	6148 (198321)
AMMONIA NITROGEN					
LAKE MUPON	162 (5226)				162 (5226)
MON POINT	1 (32)	2 (65)	5 (161)	12 (387)	20 (645)
POINT	1168 (37677)	139 (4484)	470 (15161)	96 (3097)	1873 (60419)
TOTAL	1331 (42935)	141 (4549)	475 (15322)	108 (3484)	2055 (66290)
ORGANIC NITROGEN					
LAKE MUPON	3981 (128419)				3981 (128419)
MON POINT	84 (1419)	14 (452)	98 (3161)	122 (3935)	278 (8967)
POINT	651 (21080)	72 (2323)	153 (4935)	40 (1290)	916 (29588)
TOTAL	4676 (150838)	86 (2775)	251 (8096)	162 (5225)	5175 (166934)
CHLORIDE					
LAKE MUPON	91831 (2962290)				91831 (2962290)
MON POINT	2516 (81161)	4364 (140774)	5310 (171290)	4413 (142355)	16603 (535580)
POINT	163669 (5279685)	4697 (151516)	10605 (342097)	2762 (89097)	181733 (5862355)
TOTAL	258016 (8323096)	9061 (292290)	15915 (513387)	7175 (231452)	290167 (9360225)
SILICA					
LAKE MUPON	7608 (245414)				7608 (245414)
MON POINT	478 (15419)	169 (5452)	560 (18065)	596 (19226)	1803 (58162)
POINT	1307 (42161)	131 (4290)	333 (10742)	86 (2774)	1859 (59967)
TOTAL	9393 (302999)	302 (9742)	893 (28807)	682 (22000)	11270 (363548)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1978
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	180 (4667)				180 (4667)
MON POINT	26 (867)	2 (67)	7 (233)	14 (467)	49 (1634)
POINT	264 (8800)	50 (1667)	206 (6867)	29 (967)	549 (18301)
TOTAL	470 (14334)	52 (1734)	213 (7100)	43 (1434)	738 (24602)
ORTHOPHOSPHORUS					
LAKE HURON	57 (1900)				57 (1900)
MON POINT	9 (300)	1 (33)	3 (100)	3 (100)	16 (533)
POINT	124 (4133)	24 (800)	102 (3400)	15 (500)	265 (8633)
TOTAL	190 (6333)	25 (833)	105 (3500)	18 (600)	338 (11266)
NITRATE-NITRITE NITROGEN					
LAKE HURON	3774 (125800)				3774 (125800)
MON POINT	252 (8400)	98 (3267)	133 (4433)	293 (9767)	776 (25867)
POINT	906 (30200)	155 (5167)	234 (7800)	110 (3667)	1405 (46834)
TOTAL	4932 (160000)	253 (8434)	367 (12233)	403 (13434)	5955 (198501)
AMMONIA NITROGEN					
LAKE HURON	154 (5133)				154 (5133)
MON POINT	1 (33)	3 (100)	8 (267)	7 (233)	19 (633)
POINT	1130 (37667)	148 (4933)	452 (15067)	97 (3233)	1827 (60900)
TOTAL	1285 (42833)	151 (5033)	460 (15334)	104 (3466)	2000 (66666)
ORGANIC NITROGEN					
LAKE HURON	3777 (125900)				3777 (125900)
MON POINT	47 (1567)	68 (2267)	67 (2233)	96 (3200)	278 (9267)
POINT	633 (21100)	72 (2400)	147 (4900)	39 (1300)	891 (29700)
TOTAL	4457 (148567)	140 (4667)	214 (7133)	135 (4500)	4946 (164867)
CHLORIDE					
LAKE HURON	47127 (2904233)				47127 (2904233)
MON POINT	2860 (95333)	4821 (227567)	3100 (103333)	4379 (145967)	17160 (572000)
POINT	159416 (5313867)	5346 (178200)	10289 (342967)	2672 (89067)	177723 (592101)
TOTAL	249403 (8113433)	12167 (405567)	13389 (446300)	7051 (235034)	280210 (9400334)
SILICA					
LAKE HURON	7218 (240600)				7218 (240600)
MON POINT	453 (15100)	246 (8200)	380 (12667)	498 (16600)	1577 (52567)
POINT	1281 (42700)	161 (5367)	322 (10733)	83 (2767)	1847 (61567)
TOTAL	8952 (298400)	407 (13567)	702 (23400)	581 (19367)	10642 (354734)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR DECEMBER, 1978
(AVE DAILY LOADS IN KG/DAY)

	DEI/ST. CLIP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	139 (4484)	10 (323)	45 (1452)	28 (903)	139 (4484)
DOWN POINT	43 (1387)	68 (2194)	238 (7677)	29 (935)	126 (4065)
POINT	272 (8774)	78 (2517)	283 (9129)	57 (1838)	687 (19580)
TOTAL	454 (14645)				872 (28129)
ORTHOPHOSPHORUS					
LAKE MURPHY	57 (1839)	2 (65)	10 (323)	5 (161)	57 (1839)
DOWN POINT	16 (516)	34 (1097)	119 (3839)	15 (484)	33 (1065)
POINT	128 (4129)	36 (1162)	129 (4162)	20 (645)	296 (9549)
TOTAL	201 (6484)				386 (12453)
NITRATE-NITRIF NITROGEN					
LAKE MURPHY	3764 (121419)	689 (22226)	709 (22871)	512 (16516)	3764 (121419)
DOWN POINT	591 (19045)	190 (6129)	271 (8742)	114 (3677)	2501 (80678)
POINT	940 (30323)	879 (28355)	940 (31613)	626 (20193)	1515 (48871)
TOTAL	5295 (170807)				7780 (250968)
AMMONIA NITROGEN					
LAKE MURPHY	153 (4935)	5 (161)	21 (677)	20 (645)	153 (4935)
DOWN POINT	3 (97)	174 (5613)	482 (15548)	103 (3323)	49 (1500)
POINT	1179 (38032)	179 (5774)	503 (16225)	123 (3968)	1938 (62516)
TOTAL	1335 (43064)				2140 (69031)
ORGANIC NITROGEN					
LAKE MURPHY	3767 (121516)	252 (8129)	343 (11065)	202 (6516)	3767 (121516)
DOWN POINT	110 (3548)	75 (2419)	155 (5000)	40 (1290)	907 (29258)
POINT	657 (21194)	327 (10548)	498 (16065)	242 (7806)	927 (29903)
TOTAL	4534 (146258)				5601 (180677)
CHLORINE					
LAKE MURPHY	96880 (2802581)	10804 (348516)	14648 (473806)	6247 (201516)	86880 (2802581)
DOWN POINT	5528 (178323)	5622 (181355)	10488 (343484)	2762 (89097)	37267 (1202161)
POINT	167004 (5387226)	16426 (529871)	25336 (817290)	9009 (290613)	186036 (6001162)
TOTAL	259412 (8368130)				310183 (10005904)
SILICA					
LAKE MURPHY	7198 (232194)	944 (30452)	1070 (60323)	1097 (35387)	7198 (232194)
DOWN POINT	866 (27935)	174 (5613)	333 (10742)	96 (2774)	4777 (150097)
POINT	1343 (43323)	1118 (36065)	2203 (71065)	1183 (38161)	1936 (62452)
TOTAL	9407 (303452)				13911 (448743)

BASIN LOADINGS IN METRIC TONS PER MONTH FROM JANUARY, 1979
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	114 (3677)	45 (1452)	170 (5484)	124 (4000)	114 (3677)
DOWN POINT	63 (2032)	53 (1710)	169 (5452)	25 (806)	402 (12968)
POINT	186 (6080)	98 (3162)	339 (10936)	149 (4806)	433 (13968)
TOTAL	363 (11789)				949 (30613)
ORTHOPHOSPHORUS					
LAKE MURPHY	46 (1484)	19 (613)	24 (774)	13 (419)	46 (1484)
DOWN POINT	23 (742)	27 (871)	81 (2613)	13 (419)	79 (2508)
POINT	130 (4194)	46 (1494)	105 (3387)	26 (838)	251 (8097)
TOTAL	199 (6420)				376 (12129)
NITRATE-NITRITE NITROGEN					
LAKE MURPHY	3042 (98129)	1062 (34258)	1292 (41677)	780 (25161)	3042 (98129)
DOWN POINT	1077 (34782)	204 (6581)	245 (9194)	116 (3742)	4211 (135838)
POINT	933 (30097)	1266 (40839)	1577 (50871)	896 (28903)	1538 (49614)
TOTAL	5052 (162968)				8791 (263581)
AMMONIA NITROGEN					
LAKE MURPHY	124 (4000)	5 (161)	36 (1161)	29 (935)	124 (4000)
DOWN POINT	11 (355)	260 (8387)	484 (15613)	120 (3871)	81 (2612)
POINT	1202 (38774)	265 (8548)	520 (16774)	149 (4806)	2066 (66645)
TOTAL	1337 (43129)				2271 (73257)
ORGANIC NITROGEN					
LAKE MURPHY	3044 (98194)	352 (11355)	451 (27452)	393 (12677)	3044 (98194)
DOWN POINT	211 (6806)	79 (2548)	160 (5161)	41 (1323)	1807 (58290)
POINT	656 (21161)	431 (13903)	1011 (32613)	434 (14000)	936 (30193)
TOTAL	3911 (126161)				5787 (186677)
CHLORIDE					
LAKE MURPHY	70224 (2265290)	15002 (483935)	23733 (765581)	8863 (285903)	70224 (2265290)
DOWN POINT	8311 (268097)	5587 (180226)	10923 (352355)	2799 (90290)	55909 (1803516)
POINT	163948 (5289935)	20589 (664161)	34656 (1117936)	11662 (376193)	183297 (5912806)
TOTAL	242523 (7823322)				309430 (9981612)
SILICA					
LAKE MURPHY	5817 (187645)	1696 (54710)	3580 (115484)	1892 (61032)	5817 (187645)
DOWN POINT	1356 (43782)	174 (5613)	341 (11000)	88 (2839)	8524 (274968)
POINT	4501 (274226)	1870 (60323)	3921 (126484)	1980 (63871)	1931 (62291)
TOTAL					16272 (524904)

BASED LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1979
(AVE DAILY LOADS IN KG/DAY)

	DEP/ST. CLP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	107 (3021)	34 (1214)	217 (7750)	22 (786)	107 (3021)
NOR. POINT	26 (929)	47 (1679)	160 (5714)	23 (821)	299 (10679)
POINT	167 (5943)	81 (2893)	377 (13464)	45 (1607)	397 (14178)
TOTAL	300 (10714)				803 (28678)
ORTHOPHOSPHORUS					
LAKE MURON	84 (1571)	14 (500)	31 (1107)	4 (143)	84 (1571)
NOR. POINT	9 (321)	24 (857)	74 (2714)	11 (393)	58 (2071)
POINT	118 (4214)	38 (1357)	107 (3821)	15 (536)	229 (8178)
TOTAL	171 (6106)				331 (11020)
NITRATE-NITRILE NITROGEN					
LAKE MURON	2906 (103786)	804 (28714)	1713 (61179)	245 (8750)	2906 (103786)
NOR. POINT	240 (8571)	185 (6607)	258 (9214)	104 (3714)	3002 (107214)
POINT	837 (29893)	989 (35321)	1971 (70393)	349 (12464)	1384 (49428)
TOTAL	3983 (142250)				7292 (260428)
AMMONIA NITROGEN					
LAKE MURON	118 (4214)	4 (143)	42 (1500)	15 (536)	118 (4214)
NOR. POINT	3 (107)	226 (8071)	442 (15786)	90 (3214)	64 (2286)
POINT	1061 (37893)	230 (8214)	484 (17286)	105 (3750)	1819 (64964)
TOTAL	1182 (42214)				2001 (71464)
ORGANIC NITROGEN					
LAKE MURON	2908 (103857)	199 (7107)	1074 (38357)	136 (4857)	2908 (103857)
NOR. POINT	53 (1893)	71 (2536)	143 (5107)	36 (1286)	1462 (52214)
POINT	549 (21036)	270 (9683)	1217 (43464)	172 (6183)	839 (29965)
TOTAL	3510 (126786)				5209 (186036)
CHLORIDE					
LAKE MURON	67087 (2395964)	10718 (382786)	21667 (773821)	4051 (144679)	67087 (2395964)
NOR. POINT	2756 (98429)	5046 (180214)	9866 (352357)	2527 (90250)	39192 (1399715)
POINT	147877 (5281321)	15764 (563000)	31533 (1126178)	6578 (234920)	165316 (5904182)
TOTAL	217720 (7775714)				271595 (9699821)
SILICA					
LAKE MURON	5558 (198500)	1346 (49500)	3555 (126964)	618 (22071)	5558 (198500)
NOR. POINT	429 (15321)	157 (5607)	308 (11000)	79 (2821)	5988 (213856)
POINT	1180 (42143)	1583 (55107)	3863 (137964)	697 (24892)	1724 (61571)
TOTAL	7167 (255964)				13270 (473927)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH, 1979
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	137 (4419)	550 (17742)	845 (24548)	374 (12065)	137 (4419)
NON POINT	282 (9097)	55 (1774)	180 (5806)	25 (806)	2091 (67452)
POINT	186 (6000)	55 (1774)	180 (5806)	25 (806)	486 (16386)
TOTAL	605 (19516)	605 (19516)	1065 (34354)	399 (12871)	2674 (86257)
ORTHO PHOSPHORUS					
LAKE MURON	56 (1806)	173 (5581)	129 (4161)	52 (1677)	56 (1806)
NON POINT	117 (3774)	27 (871)	87 (2806)	13 (419)	471 (15193)
POINT	131 (4226)	200 (6452)	216 (6967)	65 (2096)	258 (8322)
TOTAL	304 (9806)	200 (6452)	216 (6967)	65 (2096)	785 (25321)
NITRATE-NITRITE NITROGEN					
LAKE MURON	3705 (119516)	6739 (217387)	5639 (181903)	2794 (90290)	3705 (119516)
NON POINT	4655 (150161)	204 (6581)	285 (9194)	116 (3742)	19832 (639741)
POINT	975 (31452)	6903 (223968)	5924 (191097)	2915 (94032)	1580 (50969)
TOTAL	9335 (301129)	6903 (223968)	5924 (191097)	2915 (94032)	25117 (810226)
AMMONIA NITROGEN					
LAKE MURON	151 (4871)	625 (20161)	247 (7968)	131 (4226)	151 (4871)
NON POINT	168 (5419)	297 (9581)	496 (16000)	134 (4323)	1171 (37778)
POINT	1265 (40806)	922 (29742)	743 (23968)	265 (8549)	2192 (70710)
TOTAL	1584 (51096)	922 (29742)	743 (23968)	265 (8549)	3514 (113355)
ORGANIC NITROGEN					
LAKE MURON	3708 (119613)	1906 (61484)	3678 (125097)	1201 (38742)	3708 (119613)
NON POINT	1201 (38742)	84 (2710)	160 (5161)	41 (1323)	8186 (264065)
POINT	645 (22419)	1990 (64194)	4038 (130256)	1242 (40065)	980 (31613)
TOTAL	5604 (180774)	1990 (64194)	4038 (130256)	1242 (40065)	12074 (415291)
CHLORIDE					
LAKE MURON	85529 (2759000)	56391 (1819065)	66010 (2129355)	19110 (616452)	85529 (2759000)
NON POINT	59384 (1915613)	5587 (180226)	10923 (352355)	2799 (90290)	200895 (6480485)
POINT	167240 (5398839)	61978 (1999291)	76933 (2481710)	21909 (706742)	184549 (6017710)
TOTAL	312153 (10069452)	61978 (1999291)	76933 (2481710)	21909 (706742)	472973 (15257195)
SILICA					
LAKE MURON	7046 (228581)	10610 (342258)	10301 (333581)	4350 (140323)	7046 (228581)
NON POINT	7148 (230581)	174 (5613)	341 (11000)	88 (2839)	32449 (1046743)
POINT	1346 (43419)	10784 (347871)	10862 (347581)	4438 (143162)	1949 (62871)
TOTAL	14540 (502581)	10784 (347871)	10862 (347581)	4438 (143162)	41484 (1338195)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1979
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURUM	137 (4567)	612 (20800)	210 (7000)	137 (4567)
MON POINT	360 (12000)	167 (5567)	24 (800)	1698 (56600)
POINT	180 (6000)	53 (1767)	24 (800)	424 (14134)
TOTAL	677 (22567)	779 (25967)	234 (7800)	2259 (75301)
ORTHO PHOSPHORUS				
LAKE MURUM	56 (1867)	120 (4000)	53 (1767)	56 (1867)
MON POINT	152 (5067)	84 (2800)	12 (400)	486 (16201)
POINT	127 (4233)	204 (6800)	65 (2167)	249 (8300)
TOTAL	335 (11167)	204 (6800)	65 (2167)	791 (26368)
NITRATE-NITRITE-NITROGEN				
LAKE MURUM	3699 (123300)	5362 (178733)	2235 (74500)	3699 (123300)
MON POINT	5113 (170433)	276 (9200)	112 (3733)	20262 (675399)
POINT	1005 (33500)	5618 (187933)	2347 (78233)	1591 (53033)
TOTAL	9817 (327233)	7750 (258333)	2347 (78233)	25552 (851732)
AMMONIA NITROGEN				
LAKE MURUM	151 (5033)	217 (7233)	139 (4633)	151 (5033)
MON POINT	267 (8900)	475 (15833)	130 (4333)	1176 (39199)
POINT	1231 (41033)	692 (23066)	269 (8966)	2123 (70766)
TOTAL	1609 (54966)	840 (28000)	269 (8966)	3450 (114998)
ORGANIC NITROGEN				
LAKE MURUM	3702 (123400)	2750 (91667)	946 (31533)	3702 (123400)
MON POINT	1514 (50467)	153 (5100)	39 (1300)	7034 (234467)
POINT	727 (24233)	2903 (96767)	985 (32833)	1000 (33333)
TOTAL	5943 (198100)	2903 (96767)	985 (32833)	11736 (391200)
CHLORIDE				
LAKE MURUM	85384 (2846133)	56713 (1890433)	17960 (598667)	85384 (2846133)
MON POINT	44086 (3134433)	10571 (352367)	2709 (90300)	229020 (7634000)
POINT	161845 (5394833)	67284 (2242800)	20669 (688967)	180533 (601767)
TOTAL	341277 (11375899)	67284 (2242800)	20669 (688967)	494917 (16497900)
SILICA				
LAKE MURUM	7073 (235767)	8594 (286467)	3165 (105500)	7073 (235767)
MON POINT	9081 (302700)	330 (11000)	85 (2833)	31483 (1049434)
POINT	1303 (43433)	8924 (297467)	3250 (104333)	1886 (62866)
TOTAL	17457 (581900)	10811 (360367)	3250 (104333)	40442 (1348067)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MAY , 1979
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE HURON	151 (4871)	155 (5000)	242 (7806)	36 (1161)	151 (4871)
MON POINT	60 (1935)	55 (1774)	176 (5677)	25 (806)	493 (15902)
POINT	186 (6000)	210 (6774)	418 (13483)	61 (1967)	482 (14257)
TOTAL	397 (12806)				1086 (35030)
ORTHO PHOSPHORUS					
LAKE HURON	61 (1968)	51 (1645)	25 (806)	14 (452)	61 (1968)
MON POINT	26 (839)	27 (871)	83 (2677)	13 (419)	116 (3742)
POINT	110 (4194)	78 (2516)	108 (3483)	27 (871)	253 (8161)
TOTAL	217 (7001)				430 (13871)
NITRATE-NITRITE NITROGEN					
LAKE HURON	4076 (131484)	2710 (87419)	1946 (62774)	764 (24685)	4076 (131484)
MON POINT	1082 (34903)	204 (6581)	285 (9194)	116 (3782)	6502 (209781)
POINT	945 (30884)	2914 (94000)	2231 (71968)	880 (28387)	1550 (50011)
TOTAL	6103 (196871)				12128 (391226)
AMMONIA NITROGEN					
LAKE HURON	166 (5355)	71 (2290)	40 (1290)	18 (581)	166 (5355)
MON POINT	11 (355)	295 (9516)	495 (15968)	130 (4194)	140 (4516)
POINT	1199 (38677)	366 (11806)	535 (17258)	148 (4775)	2119 (68355)
TOTAL	1376 (44397)				2425 (78226)
ORGANIC NITROGEN					
LAKE HURON	4079 (131581)	684 (22065)	1170 (37742)	227 (7323)	4079 (131581)
MON POINT	230 (7419)	42 (2645)	160 (5161)	41 (1323)	2311 (74549)
POINT	668 (21548)	766 (24710)	1330 (42903)	268 (8646)	951 (30677)
TOTAL	4977 (160548)				7341 (236807)
CHLORINE					
LAKE HURON	94082 (3034903)	26778 (863806)	27385 (883387)	8700 (280685)	94082 (3034903)
MON POINT	25919 (836097)	5587 (180226)	10923 (352355)	2799 (90290)	88782 (2863935)
POINT	167240 (5394839)	32365 (1044032)	38308 (1235742)	11499 (370935)	186549 (6017710)
TOTAL	287241 (9265839)				369413 (11916548)
SILICA					
LAKE HURON	7794 (251419)	4017 (129581)	3834 (123677)	1156 (37290)	7794 (251419)
MON POINT	1623 (52355)	174 (5613)	341 (11000)	88 (2839)	10630 (342903)
POINT	1386 (43419)	4191 (135194)	4175 (134677)	1244 (40129)	1989 (62871)
TOTAL	10763 (347193)				20373 (657193)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR
(AVE DAILY LOADS IN KG/DAY) JUNE , 1979

	UP/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	149 (4967)	27 (900)	27 (900)	15 (500)	149 (4967)
NON POINT	27 (900)	51 (1700)	150 (5000)	24 (800)	96 (3200)
POINT	179 (5967)	78 (2600)	177 (5900)	39 (1300)	404 (13467)
TOTAL	355 (11834)				649 (21634)
ORTHOPHOSPHORUS					
LAKE MURUM	61 (2033)	13 (433)	10 (333)	4 (133)	61 (2033)
NON POINT	8 (267)	26 (867)	72 (2400)	11 (367)	35 (1166)
POINT	126 (4200)	39 (1300)	82 (2733)	15 (500)	235 (7834)
TOTAL	195 (6500)				331 (11033)
NITRATE-NITRITE-NITROGEN					
LAKE MURUM	4039 (134633)	864 (28800)	629 (20967)	268 (8933)	4039 (134633)
NON POINT	245 (8167)	198 (6600)	273 (9100)	112 (3733)	2006 (66867)
POINT	900 (30000)	1062 (35400)	902 (30067)	380 (12666)	1483 (49433)
TOTAL	5184 (172800)				7528 (250933)
AMMONIA NITROGEN					
LAKE MURUM	164 (5467)	2 (67)	10 (333)	8 (267)	164 (5467)
NON POINT	3 (100)	216 (7200)	466 (15533)	104 (3467)	23 (767)
POINT	1136 (37867)	218 (7267)	476 (15866)	112 (3734)	1922 (64067)
TOTAL	1303 (43434)				2109 (70301)
ORGANIC NITROGEN					
LAKE MURUM	4042 (134733)	295 (9833)	236 (7867)	89 (2967)	4042 (134733)
NON POINT	63 (2100)	76 (2533)	152 (5067)	39 (1300)	683 (22767)
POINT	634 (21133)	371 (12366)	388 (12934)	128 (4267)	901 (30033)
TOTAL	4739 (157966)				5626 (187533)
CHLORIDE					
LAKE MURUM	93225 (3107500)	11839 (394633)	10987 (36900)	4351 (145033)	93225 (3107500)
NON POINT	5844 (198000)	5408 (180267)	10571 (352367)	2709 (90300)	32981 (1099366)
POINT	160724 (5357467)	17247 (574900)	21518 (71267)	7060 (235333)	179412 (590401)
TOTAL	259793 (8459767)				305618 (10187267)
SILICA					
LAKE MURUM	7723 (257433)	1304 (43467)	1408 (46933)	472 (15733)	7723 (257433)
NON POINT	475 (15833)	168 (5600)	330 (11000)	85 (2833)	3659 (121966)
POINT	1286 (42867)	1472 (49067)	1738 (57933)	557 (18566)	1869 (62300)
TOTAL	9484 (316133)				13251 (441699)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JULY, 1979
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	156 (5032)	77 (2484)	12 (387)	15 (484)	156 (5032)
NON POINT	28 (903)	54 (1742)	150 (4839)	25 (806)	132 (4258)
POINT	182 (5871)	131 (4226)	162 (5226)	40 (1290)	411 (13258)
TOTAL	366 (11806)				699 (22588)
ORTHO PHOSPHORUS					
LAKE MURUM	64 (2065)	36 (1161)	4 (129)	2 (65)	64 (2065)
NON POINT	9 (290)	27 (871)	73 (2355)	13 (419)	51 (1645)
POINT	130 (4194)	63 (2032)	77 (2484)	15 (484)	283 (9039)
TOTAL	203 (6549)				358 (11589)
NITRATE-NITRIF NITROGEN					
LAKE MURUM	4232 (136516)	1539 (49645)	389 (12548)	194 (3355)	4232 (136516)
NON POINT	161 (5194)	204 (6561)	279 (9000)	116 (3742)	2193 (70782)
POINT	930 (30000)	1743 (56226)	668 (21548)	220 (7097)	1529 (49323)
TOTAL	5323 (171710)				7954 (256581)
AMMONIA NITROGEN					
LAKE MURUM	172 (5508)	48 (1548)	6 (194)	5 (161)	172 (5508)
NON POINT	2 (65)	278 (8968)	477 (15387)	100 (3226)	61 (1968)
POINT	1174 (37871)	326 (10516)	483 (15581)	105 (3387)	2029 (65452)
TOTAL	1348 (43484)				2262 (72968)
ORGANIC NITROGEN					
LAKE MURUM	4235 (136613)	454 (14645)	173 (5581)	87 (2806)	4235 (136613)
NON POINT	70 (2258)	80 (2581)	155 (5000)	41 (1323)	784 (25290)
POINT	662 (21355)	534 (17226)	328 (10581)	128 (4129)	938 (30259)
TOTAL	4967 (160226)				5957 (192162)
CHLORIDE					
LAKE MURUM	97683 (3151065)	20209 (651903)	8113 (261710)	2849 (91903)	97683 (3151065)
NON POINT	10224 (328806)	5587 (180226)	10923 (352355)	2799 (90290)	41395 (1335322)
POINT	166314 (5371419)	25796 (832129)	19036 (614065)	5648 (182193)	185823 (5994290)
TOTAL	274421 (8552290)				324901 (10480677)
SILICA					
LAKE MURUM	8093 (261065)	2501 (80677)	990 (31935)	248 (8000)	8093 (261065)
NON POINT	466 (15032)	174 (5613)	341 (11000)	88 (2839)	4205 (135644)
POINT	1386 (43419)	2675 (86290)	1331 (42935)	336 (10839)	1949 (62871)
TOTAL	9905 (319516)				14247 (459580)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR AUGUST , 1979
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLD BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	158 (5097)	134 (4323)	44 (1419)	17 (548)	150 (5097)
NON POINT	23 (742)	53 (1710)	164 (5200)	25 (806)	218 (7032)
POINT	182 (5871)	187 (6033)	206 (6709)	42 (1354)	424 (13677)
TOTAL	363 (11710)				600 (25066)
ORTHOPHOSPHORUS					
LAKE MURUM	64 (2045)	61 (1968)	12 (387)	3 (97)	64 (2045)
NON POINT	6 (194)	27 (871)	79 (2548)	13 (414)	82 (2646)
POINT	128 (4129)	88 (2839)	91 (2935)	16 (516)	247 (7967)
TOTAL	198 (6368)				393 (12678)
NITRATE-NITRIFIC NITROGEN					
LAKE MURUM	4290 (135587)	2441 (78742)	978 (31548)	156 (5042)	4290 (138387)
NON POINT	32 (1032)	204 (6541)	285 (9194)	116 (3742)	3607 (116358)
POINT	926 (29871)	2645 (85323)	1263 (40742)	272 (8774)	1531 (49388)
TOTAL	5248 (169290)				9428 (304129)
AMMONIA NITROGEN					
LAKE MURUM	175 (5645)	174 (5613)	20 (645)	5 (161)	175 (5645)
NON POINT	1 (32)	268 (8645)	479 (15452)	102 (3290)	200 (6451)
POINT	1169 (37710)	442 (14258)	494 (16097)	107 (3451)	2018 (65097)
TOTAL	1345 (43587)				2393 (77193)
ORGANIC NITROGEN					
LAKE MURUM	4293 (138484)	700 (22581)	353 (11387)	101 (3258)	4293 (138484)
NON POINT	23 (742)	79 (2548)	160 (5161)	41 (1323)	1177 (37968)
POINT	651 (21000)	779 (25129)	513 (16548)	142 (4581)	931 (30032)
TOTAL	4967 (160226)				6401 (206484)
CHLORIDE					
LAKE MURUM	99034 (3194445)	25263 (814935)	14071 (453903)	3511 (113258)	99034 (3194445)
NON POINT	3954 (127548)	5587 (180226)	10923 (352355)	2799 (90290)	46799 (1509648)
POINT	162655 (5248935)	30850 (995161)	24994 (806258)	6310 (203548)	181964 (5869806)
TOTAL	265643 (8569128)				327797 (10574095)
SILICA					
LAKE MURUM	8204 (264445)	3922 (126516)	1420 (61935)	326 (10516)	8204 (264445)
NON POINT	211 (6886)	174 (5613)	341 (11000)	88 (2839)	6379 (205773)
POINT	1302 (42000)	4096 (132129)	2261 (72935)	414 (13355)	1905 (61452)
TOTAL	9717 (313451)				16448 (531870)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1979
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	151 (5033)	11 (367)	175 (5033)	127 (4233)	151 (5033)
NON POINT	20 (667)	50 (1667)	165 (5500)	24 (800)	333 (11100)
POINT	174 (5800)	61 (2030)	340 (11333)	151 (5033)	413 (13767)
TOTAL	345 (11500)				897 (29900)
ORTHO PHOSPHORUS					
LAKE MURON	61 (2033)	3 (100)	11 (367)	4 (133)	61 (2033)
NON POINT	4 (133)	25 (833)	80 (2667)	12 (400)	22 (733)
POINT	123 (4100)	28 (933)	91 (3034)	16 (533)	240 (8000)
TOTAL	188 (6266)				323 (10766)
NITRATE-NITRITE NITROGEN					
LAKE MURON	4095 (136500)	512 (17067)	757 (25233)	275 (9167)	4095 (136500)
NON POINT	6 (200)	198 (6600)	276 (9200)	112 (3733)	1550 (51667)
POINT	872 (29067)	710 (23667)	1033 (34433)	387 (12900)	1458 (48600)
TOTAL	4973 (165767)				7103 (236767)
AMMONIA NITROGEN					
LAKE MURON	167 (5567)	1 (33)	4 (133)	15 (500)	167 (5567)
NON POINT	0 (0)	177 (5900)	471 (15700)	98 (3267)	20 (666)
POINT	1126 (37533)	176 (5933)	475 (15833)	113 (3767)	1872 (62400)
TOTAL	1293 (43100)				2059 (68633)
ORGANIC NITROGEN					
LAKE MURON	4098 (136600)	213 (7100)	884 (29467)	272 (9067)	4098 (136600)
NON POINT	9 (300)	74 (2467)	153 (5100)	39 (1300)	1378 (45934)
POINT	622 (20733)	287 (9567)	1037 (34567)	311 (10367)	888 (29600)
TOTAL	4729 (157633)				6364 (212134)
CHLORIDE					
LAKE MURON	94532 (3151067)				94532 (3151067)
NON POINT	645 (21500)	6860 (228667)	21310 (710333)	4566 (152200)	33381 (1112700)
POINT	156249 (5208300)	5408 (180267)	10571 (352367)	2709 (90300)	178937 (5831234)
TOTAL	251426 (836067)	12268 (408934)	31881 (1062700)	7275 (242500)	302650 (10095001)
SILICA					
LAKE MURON	7631 (261033)				7631 (261033)
NON POINT	94 (3133)	743 (24767)	3186 (106200)	911 (30367)	4934 (164467)
POINT	1236 (41200)	168 (5600)	330 (11000)	85 (2833)	1819 (60633)
TOTAL	9161 (305366)	911 (30367)	3516 (117200)	996 (33200)	14584 (486133)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1979
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURPHY	151 (4871)	44 (1419)	25 (806)	151 (4871)
NON POINT	23 (742)	156 (5032)	25 (806)	95 (3064)
POINT	185 (5968)	200 (6451)	50 (1612)	404 (13032)
TOTAL	359 (11581)			650 (20967)
ORTHOPHOSPHORUS				
LAKE MURPHY	62 (2000)	7 (226)	3 (97)	62 (2000)
NON POINT	5 (161)	75 (2419)	13 (419)	18 (581)
POINT	130 (4194)	19 (613)	16 (516)	234 (7548)
TOTAL	197 (6355)			314 (10129)
NITRATE-NITRIF NITROGEN				
LAKE MURPHY	4095 (132097)	469 (15129)	319 (10290)	4095 (132097)
NON POINT	134 (4323)	279 (9000)	116 (3742)	998 (32194)
POINT	922 (29702)	748 (24129)	435 (14032)	1461 (47129)
TOTAL	5151 (166162)			6554 (211420)
AMMONIA NITROGEN				
LAKE MURPHY	167 (5387)	12 (387)	19 (613)	167 (5387)
NON POINT	1 (32)	477 (15367)	101 (3258)	35 (1129)
POINT	1169 (37750)	489 (15774)	120 (3871)	1900 (61290)
TOTAL	1337 (43129)			2102 (67806)
ORGANIC NITROGEN				
LAKE MURPHY	4098 (132194)	346 (11161)	144 (5035)	4098 (132194)
NON POINT	31 (1000)	155 (5000)	41 (1323)	606 (19548)
POINT	608 (20903)	501 (16161)	225 (7258)	921 (29710)
TOTAL	4777 (154097)			5625 (181452)
CHLORIDE				
LAKE MURPHY	94532 (3049419)	15901 (512935)	5050 (162903)	94532 (3049419)
NON POINT	2044 (65935)	10923 (352355)	2799 (90290)	20169 (908676)
POINT	162139 (5230290)	26024 (865290)	7849 (253193)	181216 (5845677)
TOTAL	258715 (8345644)			303917 (9803772)
SILICA				
LAKE MURPHY	7832 (252645)	2039 (65774)	928 (29935)	7832 (252645)
NON POINT	329 (10613)	341 (11000)	88 (2839)	3509 (113193)
POINT	1283 (41387)	361 (11645)	1016 (32774)	1860 (60000)
TOTAL	9444 (304645)			13201 (425038)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1979
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	144 (4800)	135 (4500)	192 (6400)	33 (1100)	144 (4800)
DOWN POINT	82 (2733)	52 (1733)	164 (5467)	24 (800)	442 (14733)
POINT	179 (5967)	147 (6233)	356 (11867)	57 (1900)	419 (13967)
TOTAL	405 (13500)				1005 (33500)
ORTHO PHOSPHORUS					
LAKE MURPHY	59 (1967)	37 (1233)	46 (1533)	10 (333)	59 (1967)
DOWN POINT	34 (1133)	20 (667)	82 (2733)	12 (400)	127 (4232)
POINT	126 (4200)	63 (2100)	128 (4266)	22 (733)	246 (8200)
TOTAL	219 (7300)				432 (14399)
NITRATE-NITRIFIC NITROGEN					
LAKE MURPHY	3907 (130233)	2127 (70900)	2367 (78900)	705 (23500)	3907 (130233)
DOWN POINT	1523 (49100)	198 (6600)	276 (9200)	112 (3733)	6522 (217400)
POINT	913 (30433)	2325 (77500)	2693 (89100)	617 (21233)	1499 (49966)
TOTAL	6143 (204766)				11928 (397599)
AMMONIA NITROGEN					
LAKE MURPHY	159 (5300)	39 (1300)	81 (2700)	22 (733)	159 (5300)
DOWN POINT	16 (533)	265 (8833)	471 (15700)	114 (3800)	158 (5266)
POINT	1186 (39533)	304 (10133)	552 (18400)	136 (4533)	2036 (67866)
TOTAL	1361 (45366)				2353 (78432)
ORGANIC NITROGEN					
LAKE MURPHY	3909 (130300)	587 (19567)	695 (22833)	241 (8033)	3909 (130300)
DOWN POINT	322 (10733)	78 (2600)	153 (5100)	39 (1300)	2045 (68166)
POINT	685 (21500)	665 (22167)	1048 (34933)	280 (9333)	915 (30500)
TOTAL	4916 (162533)				6869 (228466)
CHLORIDE					
LAKE MURPHY	90176 (3005867)	20576 (685867)	27794 (926633)	7464 (248800)	90176 (3005867)
DOWN POINT	17420 (580667)	5408 (180267)	10571 (352367)	2709 (90300)	73259 (2441967)
POINT	161845 (5348833)	25984 (866134)	38370 (1279000)	10173 (339100)	180533 (6017767)
TOTAL	269441 (8961367)				343968 (11465601)
SILICA					
LAKE MURPHY	7471 (249033)	3371 (112367)	4266 (142200)	1227 (40900)	7471 (249033)
DOWN POINT	1711 (57033)	168 (5600)	330 (11000)	85 (2833)	18575 (625500)
POINT	1303 (43433)	3539 (117967)	4596 (153200)	1312 (43733)	1686 (62866)
TOTAL	10485 (349409)				19932 (664399)

AD-A132 454

LAKE ERIE NUTRIENT LOADS 1970-1980(U) CORPS OF
ENGINEERS BUFFALO NY BUFFALO DISTRICT
S M YAKSICH ET AL. SEP 82

213

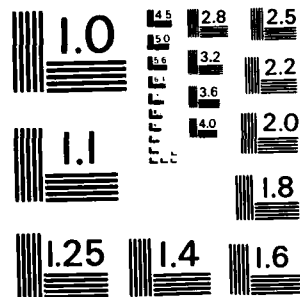
UNCLASSIFIED

F/G 13/2

NL



END
DATE
FILMED
9-83
DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

BASIN LOADINGS IN MEIPIC TONS PER MONTH FOR DECEMBER, 1979
(AVE DAILY LOADS IN KG/DAY)

	OFF/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	148 (4774)	343 (12355)	477 (15387)	132 (4258)	148 (4774)
WOM POINT	176 (5677)	55 (1774)	180 (5806)	25 (806)	1168 (37677)
POINT	186 (6000)				486 (1486)
TOTAL	510 (16451)	438 (14129)	657 (21193)	157 (5064)	1762 (56837)
NITRO PHOSPHORUS					
LAKE MURUM	60 (1935)	104 (3355)	80 (2581)	27 (871)	60 (1935)
WOM POINT	74 (2387)	27 (871)	45 (2742)	13 (419)	285 (9194)
POINT	131 (4226)	131 (4226)	165 (5323)	40 (1290)	256 (8258)
TOTAL	265 (8548)				601 (19367)
NITRATE-NITRIF NITROGEN					
LAKE MURUM	4017 (129581)	4889 (16935)	3660 (118065)	1313 (42355)	4017 (129581)
WOM POINT	2563 (82677)	204 (6581)	245 (9194)	116 (3742)	17525 (404032)
POINT	951 (30677)	5193 (167516)	3945 (127259)	1429 (46097)	1556 (50194)
TOTAL	7531 (242935)				18098 (583807)
AMMONIA NITROGEN					
LAKE MURUM	164 (5290)	204 (6484)	112 (3613)	42 (1355)	164 (5290)
WOM POINT	66 (2124)	204 (6484)	489 (15774)	134 (4323)	514 (16581)
POINT	1261 (40677)	548 (18968)	601 (19387)	176 (5678)	2178 (70258)
TOTAL	1491 (48096)				2856 (92129)
ORGANIC NITROGEN					
LAKE MURUM	4020 (129677)	1435 (46290)	2055 (66290)	518 (16710)	4020 (129677)
WOM POINT	726 (23484)	82 (2645)	160 (5161)	41 (1323)	4736 (152774)
POINT	671 (21645)	1517 (48935)	2215 (71451)	559 (18033)	954 (30774)
TOTAL	5419 (174806)				9710 (313225)
CHLORINE					
LAKE MURUM	42732 (2991355)	38401 (1238742)	43892 (1415871)	12341 (398097)	92732 (2991355)
WOM POINT	28065 (905323)	5587 (180226)	10923 (352352)	2799 (90290)	122609 (3958033)
POINT	167240 (5398839)	43988 (1418968)	54815 (1768226)	15140 (488387)	186589 (6017718)
TOTAL	284037 (9291517)				401980 (12967098)
SILICA					
LAKE MURUM	7682 (247806)	6963 (224613)	6950 (224194)	2361 (76161)	7682 (247806)
WOM POINT	4220 (136129)	174 (5613)	341 (11000)	88 (2839)	20494 (661097)
POINT	1346 (43419)	7117 (230226)	7291 (235194)	2449 (79000)	1949 (62871)
TOTAL	13248 (427354)				30125 (971774)

Basin Loadings in Metric Tons per Month for January, 1980
(Ave Daily Loads in kg/day)

	UFT/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MUPUN	153 (4935)	100 (3226)	110 (3508)	51 (1645)	153 (4935)
NO. POINT	73 (2355)	54 (1742)	135 (4355)	25 (806)	334 (10774)
POINT	176 (5677)	154 (4968)	245 (7903)	76 (2451)	390 (12580)
TOTAL	402 (12967)				877 (28269)
ORTHO PHOSPHORUS					
LAKE MUPUN	61 (1968)	53 (1710)	30 (968)	15 (484)	61 (1968)
NO. POINT	24 (935)	27 (871)	66 (2129)	12 (387)	127 (4097)
POINT	133 (4290)	40 (1251)	96 (3097)	27 (871)	238 (7677)
TOTAL	223 (7193)				476 (13742)
NITRATE-NITRIF NITROGEN					
LAKE MUPUN	404 (130452)	1712 (55226)	1413 (45581)	923 (29774)	404 (130452)
NO. POINT	1359 (43839)	220 (7097)	310 (1000)	134 (4323)	5407 (174820)
POINT	948 (30581)	1932 (6323)	1723 (55581)	1057 (34097)	1612 (52001)
TOTAL	6351 (208972)				11063 (356873)
AMMONIA NITROGEN					
LAKE MUPUN	164 (5290)	153 (4935)	23 (742)	21 (677)	164 (5290)
NO. POINT	8 (258)	305 (9839)	527 (17000)	142 (4581)	285 (9012)
POINT	1248 (40256)	458 (14774)	550 (17742)	163 (5258)	2222 (71678)
TOTAL	1420 (45896)				2591 (83560)
ORGANIC NITROGEN					
LAKE MUPUN	4003 (129129)	513 (16508)	625 (20161)	275 (8871)	4003 (129129)
NO. POINT	238 (7677)	88 (2839)	166 (5355)	48 (1548)	1651 (53257)
POINT	665 (21452)	601 (19387)	791 (25516)	323 (10419)	967 (31194)
TOTAL	4906 (154258)				6621 (213560)
CHLORIDE					
LAKE MUPUN	89623 (2891065)	26239 (846819)	21922 (707161)	9047 (291839)	89623 (2891065)
NO. POINT	16534 (53355)	5996 (193419)	11399 (367710)	3249 (108806)	73742 (2378774)
POINT	104581 (348161)	32235 (1059838)	33371 (1074671)	12296 (396645)	129025 (4162096)
TOTAL	210538 (6920581)				292390 (9431935)
SILICA					
LAKE MUPUN	7130 (230000)	3281 (105839)	2998 (96710)	1355 (43710)	7130 (230000)
NO. POINT	1644 (53032)	197 (6332)	356 (11484)	101 (3258)	9278 (299291)
POINT	1304 (43355)	3468 (111871)	3354 (108194)	1456 (46968)	1948 (64129)
TOTAL	10118 (326387)				14396 (593420)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR FEBRUARY, 1980
(AVE DAILY LOADS IN KG/DAY)

	UPST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	140 (4828)	59 (2034)	105 (3621)	14 (483)	140 (230000)
WMA POINT	24 (428)	50 (1724)	126 (4345)	23 (793)	202 (6966)
POINT	165 (5690)	109 (3759)	231 (7966)	37 (1276)	364 (12552)
TOTAL	329 (11545)				706 (24346)
NITRO PHOSPHORUS					
LAKE MURUM	56 (1931)	25 (862)	15 (488)	2 (69)	56 (230000)
WMA POINT	8 (276)	25 (862)	61 (2103)	12 (414)	88 (1655)
POINT	124 (4276)	50 (1724)	74 (2552)	14 (483)	222 (7655)
TOTAL	188 (6483)				326 (11242)
NITRATE-NITRITE NITROGEN					
LAKE MURUM	3708 (127842)	1179 (40653)	983 (32517)	149 (5138)	3708 (230000)
WMA POINT	256 (828)	206 (7103)	291 (10034)	125 (4310)	2527 (87138)
POINT	887 (30546)	1365 (47759)	1234 (42552)	274 (9448)	1509 (52033)
TOTAL	4851 (167276)				7744 (267035)
AMMONIA NITROGEN					
LAKE MURUM	151 (5207)	32 (1103)	6 (207)	8 (276)	151 (230000)
WMA POINT	3 (103)	265 (9138)	492 (16966)	102 (3517)	29 (1699)
POINT	1131 (39000)	297 (10241)	498 (17172)	110 (3793)	1990 (68621)
TOTAL	1285 (44310)				2190 (75516)
ORGANIC NITROGEN					
LAKE MURUM	3670 (126552)	370 (12759)	539 (18586)	100 (3448)	3670 (230000)
WMA POINT	61 (2103)	79 (2724)	155 (5345)	45 (1552)	1070 (36896)
POINT	622 (21448)	449 (15683)	694 (23931)	145 (5000)	901 (31069)
TOTAL	4353 (150103)				5641 (194517)
CHLORIDE					
LAKE MURUM	82172 (2833517)	15198 (524069)	15513 (534931)	3113 (107385)	82172 (230000)
WMA POINT	4261 (146931)	5610 (193448)	10664 (367724)	3040 (104828)	38085 (1313276)
POINT	101894 (3513546)	20808 (737517)	26177 (902655)	6153 (212172)	121208 (4179586)
TOTAL	184327 (6494034)				241465 (8326378)
SILICA					
LAKE MURUM	6525 (225000)	2043 (70448)	2223 (76655)	403 (13897)	6525 (230000)
WMA POINT	478 (16483)	174 (6000)	333 (11483)	95 (3276)	5147 (177483)
POINT	1253 (43207)	2217 (76448)	2556 (88138)	498 (17172)	1855 (63966)
TOTAL	8256 (284690)				13527 (466448)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MARCH , 1980
(AVE DAILY LOADS IN KG/DAY)

	WEST BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURUM	149 (4006)	865 (27903)	177 (5710)	149 (4006)
NO. POINT	252 (6129)	135 (3355)	25 (806)	1991 (60226)
POINT	176 (5677)	100 (32258)	202 (6516)	391 (12612)
TOTAL	577 (18612)			2531 (81644)
ORTHOPHOSPHORUS				
LAKE MURUM	60 (1935)	117 (3774)	28 (903)	60 (1935)
NO. POINT	94 (3194)	67 (2161)	12 (387)	427 (13774)
POINT	133 (4290)	184 (5935)	40 (1290)	239 (7709)
TOTAL	292 (9419)			726 (23418)
NITRATE-NITRITE NITROGEN				
LAKE MURUM	3964 (127871)	5316 (171484)	1327 (42806)	3964 (127871)
NO. POINT	3261 (105194)	510 (10000)	134 (4323)	18652 (601678)
POINT	1003 (32355)	5626 (181484)	1461 (47129)	1667 (53775)
TOTAL	4228 (265420)			24283 (783326)
AMMONIA NITROGEN				
LAKE MURUM	161 (5194)	168 (5419)	44 (1419)	161 (5194)
NO. POINT	121 (3903)	538 (17355)	153 (4935)	944 (30451)
POINT	1307 (42161)	706 (22774)	197 (6354)	2316 (74709)
TOTAL	1589 (51256)			3421 (110354)
ORGANIC NITROGEN				
LAKE MURUM	3923 (126548)	3037 (97468)	691 (22290)	3923 (126548)
NO. POINT	490 (31435)	166 (5355)	48 (1588)	7058 (227677)
POINT	720 (23226)	3203 (103323)	739 (23838)	1024 (33032)
TOTAL	5633 (181704)			12005 (387257)
CHLORIDE				
LAKE MURUM	87839 (2433516)	52343 (1689129)	11209 (361581)	87839 (2433516)
NO. POINT	51839 (1736782)	11394 (367710)	3249 (104806)	179315 (5784353)
POINT	110848 (3576387)	63762 (2056839)	14458 (466387)	131512 (4242322)
TOTAL	252546 (8146645)			398666 (12680193)
SILICA				
LAKE MURUM	6975 (225000)	8435 (272097)	2323 (74935)	6975 (225000)
NO. POINT	5757 (185710)	356 (11444)	101 (3258)	29213 (942353)
POINT	1373 (44290)	1791 (56545)	2424 (76193)	2017 (65064)
TOTAL	14105 (455000)			38205 (1232419)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR APRIL, 1980
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURUM	185 (8833)	403 (13433)	93 (3100)	145 (4833)
MUR. POINT	226 (7533)	53 (1767)	24 (800)	119 (3933)
POINT	171 (5700)	131 (4367)	24 (800)	123 (4033)
TOTAL	542 (18066)	598 (19934)	117 (3900)	1713 (57100)
ORTHOPHOSPHORUS				
LAKE MURUM	58 (1933)	26 (867)	26 (867)	58 (1933)
MUR. POINT	86 (2867)	82 (2733)	26 (867)	332 (11067)
POINT	128 (4267)	45 (1500)	12 (400)	231 (7701)
TOTAL	272 (9067)	147 (4900)	38 (1267)	621 (20701)
NITRATE-NITRICE NITROGEN				
LAKE MURUM	3856 (128533)	3450 (115000)	1599 (53400)	3856 (128533)
MUR. POINT	3520 (117333)	301 (10033)	130 (4333)	14871 (495700)
POINT	999 (33300)	3751 (125033)	1729 (57633)	1643 (54766)
TOTAL	8375 (279166)	6515 (217167)	1729 (57633)	20370 (678999)
AMMONIA NITROGEN				
LAKE MURUM	157 (5233)	68 (2267)	36 (1200)	157 (5233)
MUR. POINT	82 (2733)	517 (17233)	189 (6297)	638 (21267)
POINT	1263 (42100)	585 (19500)	189 (6297)	2237 (74567)
TOTAL	1502 (50666)	760 (25334)	195 (6167)	3032 (101067)
ORGANIC NITROGEN				
LAKE MURUM	3816 (127200)	1798 (59933)	476 (15867)	3816 (127200)
MUR. POINT	904 (30300)	160 (5333)	46 (1533)	4697 (156567)
POINT	713 (23767)	1958 (65266)	522 (17400)	1006 (33333)
TOTAL	5433 (181267)	1958 (65266)	522 (17400)	9519 (317300)
CHLORINE				
LAKE MURUM	85438 (2847933)	43006 (1433533)	11588 (386267)	85438 (2847933)
MUR. POINT	71000 (2366667)	11032 (367733)	3144 (104800)	190606 (6353334)
POINT	107291 (3576367)	5803 (193433)	14732 (491067)	127270 (4242333)
TOTAL	263729 (8790967)	70815 (2360500)	14732 (491067)	403314 (13443000)
SILICA				
LAKE MURUM	6780 (226000)	6171 (205700)	2099 (69967)	6780 (226000)
MUR. POINT	5468 (182267)	345 (11500)	98 (3267)	23723 (790767)
POINT	1329 (44300)	6516 (217200)	2197 (73234)	1953 (65100)
TOTAL	13577 (452567)	10166 (338866)	2197 (73234)	32456 (1081067)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR MAY , 1980
(AVE DAILY LOADS IN KG/DAY)

	DRY/ST. CLW BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURROW	155 (5000)	103 (3323)	40 (1290)	28 (903)	155 (5000)
MON POINT	55 (1774)	55 (1774)	132 (4258)	25 (806)	226 (7290)
POINT	176 (5677)	158 (5097)	172 (5548)	53 (1709)	386 (12451)
TOTAL					769 (24805)
ORTHO PHOSPHORUS					
LAKE MURROW	62 (2000)	49 (1581)	13 (419)	11 (355)	62 (2000)
MON POINT	22 (710)	27 (871)	63 (2032)	12 (387)	95 (3065)
POINT	133 (4290)	76 (2452)	76 (2451)	23 (742)	235 (7580)
TOTAL	217 (7000)				392 (12645)
NITRATE-NITRITE NITROGEN					
LAKE MURROW	4104 (132587)	1829 (59000)	776 (25032)	616 (19871)	4104 (132387)
MON POINT	894 (28539)	220 (7097)	310 (10000)	134 (4323)	4115 (132742)
POINT	964 (31097)	2049 (66097)	1046 (35032)	750 (24194)	1628 (52517)
TOTAL	5962 (192323)				9447 (317646)
AMMONIA NITROGEN					
LAKE MURROW	167 (5387)	126 (4065)	12 (387)	13 (419)	167 (5387)
MON POINT	7 (226)	315 (10161)	519 (16742)	132 (4258)	158 (5097)
POINT	1239 (39877)	441 (14226)	531 (17129)	145 (4677)	2196 (70830)
TOTAL	1404 (45290)				2521 (81322)
ORGANIC NITROGEN					
LAKE MURROW	4063 (131065)	516 (16645)	305 (9839)	160 (5161)	4063 (131065)
MON POINT	205 (6413)	90 (2903)	166 (5355)	44 (1548)	1186 (38258)
POINT	642 (22000)	606 (19548)	471 (15194)	208 (6709)	986 (31806)
TOTAL	4950 (159678)				6235 (201129)
CHLORIDE					
LAKE MURROW	90960 (2934194)	27182 (876039)	11580 (373548)	7242 (233613)	90960 (2934194)
MON POINT	21252 (685548)	5996 (193419)	11599 (367710)	3249 (104806)	67256 (2169548)
POINT	110864 (3574387)	33176 (1070258)	22479 (741258)	10491 (338419)	131512 (4242322)
TOTAL	223080 (7196129)				289728 (9346064)
SILICA					
LAKE MURROW	7223 (233000)	3330 (107419)	1554 (50129)	687 (22613)	7223 (233000)
MON POINT	1546 (49032)	147 (4632)	356 (11044)	101 (3258)	7167 (231193)
POINT	1373 (44290)	3517 (113451)	1910 (61613)	448 (14871)	2017 (65064)
TOTAL	9492 (127322)				14407 (529257)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR JUNE , 1980
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURUM	153 (5100)			153 (5100)
MUR. POINT	43 (1433)	141 (4700)	16 (533)	539 (17966)
POINT	171 (5700)	53 (1767)	24 (800)	376 (12534)
TOTAL	367 (12233)	269 (8967)	40 (1333)	1068 (35600)
ORTHOPHOSPHORUS				
LAKE MURUM	61 (2033)			61 (2033)
MUR. POINT	17 (547)	20 (667)	5 (167)	143 (4768)
POINT	126 (4247)	63 (2100)	12 (400)	229 (7634)
TOTAL	204 (6867)	83 (2767)	17 (567)	433 (14435)
NITRATE-NITRITE-NITROGEN				
LAKE MURUM	4050 (135000)	1523 (50767)	319 (10633)	4050 (135000)
MUR. POINT	870 (15647)	301 (10033)	130 (433)	6346 (211534)
POINT	953 (31747)	1624 (60800)	449 (14966)	1597 (53233)
TOTAL	5473 (182434)	1624 (60800)	449 (14966)	11993 (399767)
AMMONIA NITROGEN				
LAKE MURUM	164 (5447)			164 (5467)
MUR. POINT	8 (247)	30 (1000)	10 (333)	366 (12200)
POINT	1183 (39433)	504 (16800)	116 (3867)	2111 (70367)
TOTAL	1355 (45147)	534 (17800)	126 (4200)	2641 (88034)
ORGANIC NITROGEN				
LAKE MURUM	4009 (133633)	579 (19300)	114 (3800)	4009 (133633)
MUR. POINT	110 (3667)	160 (5333)	46 (1533)	2056 (68534)
POINT	674 (22600)	739 (24633)	160 (5333)	971 (32366)
TOTAL	4797 (159900)	1340 (44667)	160 (5333)	7036 (234533)
CHLORIDE				
LAKE MURUM	89752 (2991733)	15999 (533300)	4818 (160600)	89752 (2991733)
MUR. POINT	21820 (727333)	11032 (367733)	3144 (104800)	77671 (2595700)
POINT	107291 (3576367)	27031 (901033)	7962 (265400)	127270 (4242333)
TOTAL	218663 (7295433)	27031 (901033)	7962 (265400)	294693 (9829766)
SILICA				
LAKE MURUM	7140 (238000)	2437 (81233)	691 (23033)	7140 (238000)
MUR. POINT	949 (32300)	345 (11500)	98 (3267)	10510 (350333)
POINT	1329 (44300)	2782 (92733)	789 (26300)	1953 (65100)
TOTAL	9438 (314600)	2782 (92733)	789 (26300)	19003 (653433)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR
(AVE DAILY LOADS IN KG/DAY) JULY , 1980

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
NET/ST. CLR BASIN				
TOTAL PHOSPHORUS				
LAKE MURUM	159 (5129)	49 (1581)	20 (645)	159 (5129)
NON POINT	33 (1065)	119 (3839)	25 (806)	170 (5783)
POINT	176 (5677)	168 (5420)	45 (1451)	373 (12032)
TOTAL	368 (11871)			710 (22904)
ORTHO PHOSPHORUS				
LAKE MURUM	64 (2065)	12 (387)	4 (129)	64 (2065)
NON POINT	11 (355)	58 (1871)	12 (387)	61 (1988)
POINT	133 (4200)	70 (2258)	16 (516)	229 (7387)
TOTAL	208 (6710)			354 (11420)
NITRATE-NITRITE NITROGEN				
LAKE MURUM	4225 (136290)	601 (19387)	223 (7194)	4225 (136290)
NON POINT	442 (14258)	310 (10000)	134 (4323)	2855 (92077)
POINT	947 (30548)	911 (29387)	357 (11517)	1611 (51968)
TOTAL	5614 (181096)			8691 (280355)
AMMONIA NITROGEN				
LAKE MURUM	171 (5516)	16 (516)	0 (258)	171 (5516)
NON POINT	7 (226)	514 (16581)	117 (3774)	73 (2355)
POINT	1214 (39161)	530 (17097)	125 (4032)	2122 (68451)
TOTAL	1392 (44933)			2366 (76322)
ORGANIC NITROGEN				
LAKE MURUM	4182 (134903)	248 (8000)	114 (3677)	4182 (134903)
NON POINT	111 (3581)	164 (5290)	48 (1548)	946 (31161)
POINT	665 (21452)	412 (13290)	162 (5225)	961 (31000)
TOTAL	4958 (159936)			6109 (197064)
CHLORIDE				
LAKE MURUM	93636 (3020516)	7675 (247581)	3975 (128226)	93636 (3020516)
NON POINT	6192 (199742)	11399 (367710)	3249 (104806)	34772 (1121678)
POINT	104005 (3480032)	19074 (615291)	7224 (233032)	128649 (4149967)
TOTAL	207833 (6708290)			257057 (8292161)
SILICA				
LAKE MURUM	7440 (240000)	1317 (42484)	529 (17065)	7440 (240000)
NON POINT	792 (25508)	356 (11484)	101 (3258)	5140 (165807)
POINT	1338 (43161)	1673 (53968)	630 (20323)	1982 (63935)
TOTAL	9570 (308709)			14562 (469742)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR AUGUST, 1980
(AVE DAILY LOADS IN KG/DAY)

	UPR/ST. CLP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURON	154 (5097)	105 (3307)	93 (3000)	20 (645)	158 (5097)
NOV. POINT	38 (1226)	54 (1742)	134 (4323)	25 (806)	256 (8258)
POINT	176 (5677)	159 (5129)	227 (7323)	45 (1451)	389 (12508)
TOTAL	372 (12000)				803 (25903)
ORTHOPHOSPHORUS					
LAKE MURON	63 (2032)	45 (1452)	15 (484)	4 (129)	63 (2032)
NOV. POINT	15 (484)	27 (871)	66 (2129)	12 (387)	79 (2549)
POINT	133 (4290)	72 (2323)	81 (2613)	16 (516)	233 (7677)
TOTAL	211 (6806)				380 (12258)
NITRATE-NITRITE-NITROGEN					
LAKE MURON	4205 (135645)	1824 (58039)	813 (26226)	248 (8000)	4205 (135645)
NOV. POINT	404 (13032)	220 (7097)	310 (10000)	134 (4323)	3269 (106097)
POINT	972 (31355)	2044 (65936)	1123 (36226)	362 (12323)	1636 (52775)
TOTAL	5581 (180032)				9130 (298517)
AMMONIA-NITROGEN					
LAKE MURON	171 (5516)	91 (2935)	10 (323)	9 (290)	171 (5516)
NOV. POINT	5 (161)	301 (9710)	522 (16839)	116 (3742)	115 (3709)
POINT	1220 (39355)	392 (12645)	532 (17162)	125 (4032)	2159 (69646)
TOTAL	1396 (45032)				2485 (78871)
ORGANIC-NITROGEN					
LAKE MURON	4162 (134258)	503 (16226)	569 (18355)	127 (4097)	4162 (134258)
NOV. POINT	116 (3742)	88 (2839)	166 (5355)	48 (1548)	1315 (42420)
POINT	889 (22226)	591 (19065)	735 (23710)	175 (5645)	991 (31968)
TOTAL	4967 (160226)				6468 (208646)
CHLORINE					
LAKE MURON	93190 (3006129)	23507 (758290)	18730 (604194)	4422 (142645)	93190 (3006129)
NOV. POINT	27028 (871871)	5996 (193419)	11399 (367710)	3249 (104806)	73687 (2377000)
POINT	110868 (3576387)	29503 (951709)	30129 (971904)	7671 (247451)	131512 (4242322)
TOTAL	231086 (7454387)				294389 (9625451)
SILICA					
LAKE MURON	7409 (239000)	3087 (99581)	2801 (91645)	671 (21645)	7409 (239000)
NOV. POINT	982 (31677)	187 (6032)	356 (11484)	101 (3258)	7581 (246588)
POINT	1373 (44290)	3274 (105613)	3197 (103129)	772 (24903)	2017 (65064)
TOTAL	9764 (314967)				17087 (548612)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR SEPTEMBER, 1980
(AVE DAILY LOADS IN KG/DAY)

	WEST. BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURUM	153 (5100)			153 (5100)
NON POINT	30 (1000)			30 (1000)
POINT	171 (5700)	17 (567)	14 (467)	372 (12400)
TOTAL	354 (11800)	124 (4133)	24 (800)	605 (20167)
ORTHOPHOSPHORUS				
LAKE MURUM	61 (2033)			61 (2033)
NON POINT	11 (367)			11 (367)
POINT	128 (4267)	6 (200)	2 (67)	223 (7434)
TOTAL	200 (6667)	57 (1900)	12 (400)	310 (10334)
NITRATE-NITRITE-NITROGEN				
LAKE MURUM	8069 (135633)			8069 (135633)
NON POINT	310 (10333)			310 (10333)
POINT	932 (31067)	186 (6267)	225 (7500)	1569 (52100)
TOTAL	5311 (177033)	294 (9800)	130 (4333)	6970 (232333)
AMMONIA NITROGEN				
LAKE MURUM	165 (5500)			165 (5500)
NON POINT	3 (100)			3 (100)
POINT	1176 (39200)	7 (233)	8 (267)	2013 (67100)
TOTAL	1344 (44800)	493 (16433)	111 (3700)	2206 (73533)
ORGANIC NITROGEN				
LAKE MURUM	4028 (134267)			4028 (134267)
NON POINT	46 (1540)			46 (1540)
POINT	658 (21933)	200 (6667)	100 (3333)	1014 (34000)
TOTAL	4732 (159000)	140 (4667)	46 (1533)	5605 (186633)
CHLORIDE				
LAKE MURUM	90184 (3006133)			90184 (3006133)
NON POINT	20297 (676567)			20297 (676567)
POINT	107236 (3574533)	5456 (181867)	3808 (126933)	127130 (4237666)
TOTAL	217717 (7257233)	10977 (368900)	4952 (231733)	260814 (8693799)
SILICA				
LAKE MURUM	7170 (239000)			7170 (239000)
NON POINT	665 (22167)			665 (22167)
POINT	1329 (44300)	732 (24400)	451 (15033)	3108 (103600)
TOTAL	9164 (305467)	345 (11500)	98 (3267)	10557 (353000)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR OCTOBER, 1980
(AVE DAILY LOADS IN KG/DAY)

	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS				
LAKE MURUM NON POINT POINT TOTAL	158 (5097) 32 (1032) 176 (5677) 360 (11806)	41 (1323) 112 (3613) 153 (4936)	68 (2194) 25 (806) 93 (3000)	158 (5097) 142 (4581) 353 (11386) 653 (21064)
ORTHOPHOSPHORUS				
LAKE MURUM NON POINT POINT TOTAL	63 (2032) 10 (323) 133 (4290) 206 (6645)	8 (258) 53 (1710) 61 (1968)	6 (194) 12 (387) 18 (581)	63 (2032) 26 (840) 216 (6968) 305 (9840)
NITRAIC-NITRIFIC NITROGEN				
LAKE MURUM NON POINT POINT TOTAL	4205 (135645) 417 (13452) 944 (30452) 5566 (179549)	262 (8452) 291 (9387) 553 (17839)	479 (15452) 134 (4323) 613 (19775)	4205 (135645) 1241 (40033) 1544 (50452) 7010 (226130)
AMMONIA NITROGEN				
LAKE MURUM NON POINT POINT TOTAL	171 (5516) 3 (97) 1214 (39161) 1388 (44774)	16 (516) 508 (16387) 524 (16903)	18 (581) 122 (3935) 140 (4516)	171 (5516) 38 (1226) 2030 (65483) 2239 (72225)
ORGANIC NITROGEN				
LAKE MURUM NON POINT POINT TOTAL	4162 (134258) 81 (2613) 662 (21355) 4905 (158226)	173 (5581) 162 (5226) 335 (10807)	229 (7387) 48 (1548) 277 (8935)	4162 (134258) 548 (17678) 959 (30935) 5669 (182871)
CHLORIDE				
LAKE MURUM NON POINT POINT TOTAL	93190 (3006129) 9260 (298710) 106354 (3430774) 208804 (6735613)	5777 (186355) 11236 (362452) 17013 (548807)	5769 (186097) 3249 (104806) 9018 (290903)	93190 (3006129) 29908 (964775) 126606 (4084064) 249704 (8054968)
SILICA				
LAKE MURUM NON POINT POINT TOTAL	7409 (239000) 609 (20935) 1314 (42548) 9377 (302483)	831 (26806) 354 (11419) 1185 (38225)	1048 (33806) 101 (3258) 1149 (37064)	7409 (239000) 2866 (92450) 1958 (63160) 12233 (394610)

BASIN LOADINGS IN METRIC TONS PER MONTH FOR NOVEMBER, 1980
(AVE DAILY LOADS IN KG/DAY)

	DET/ST. CLR BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURPHY	150 (5000)				150 (5000)
MON. POINT	27 (900)	1 (33)	15 (500)	14 (467)	57 (1900)
POINT	176 (5667)	39 (1300)	104 (3633)	24 (800)	342 (11400)
TOTAL	347 (11567)	40 (1333)	124 (4133)	38 (1267)	549 (18300)
ORTHOPHOSPHORUS					
LAKE MURPHY	60 (2000)				60 (2000)
MON. POINT	7 (233)	1 (33)	5 (167)	5 (167)	18 (600)
POINT	126 (4267)	17 (567)	52 (1733)	12 (400)	209 (6967)
TOTAL	195 (6500)	18 (600)	57 (1900)	17 (567)	287 (9567)
NITRATE-NITRITE NITROGEN					
LAKE MURPHY	3992 (133067)				3992 (133067)
MON. POINT	168 (5600)	70 (2333)	121 (4033)	438 (14600)	797 (26566)
POINT	914 (30433)	167 (5567)	291 (9700)	130 (4333)	1501 (50333)
TOTAL	5073 (168100)	237 (7900)	412 (13733)	568 (18933)	6290 (209666)
AMMONIA NITROGEN					
LAKE MURPHY	162 (5400)				162 (5400)
MON. POINT	2 (67)	0 (0)	6 (200)	19 (633)	27 (900)
POINT	1176 (39000)	182 (6067)	492 (16400)	119 (3967)	1963 (65434)
TOTAL	1334 (44467)	182 (6067)	498 (16600)	138 (4600)	2152 (71734)
ORGANIC NITROGEN					
LAKE MURPHY	3951 (131700)				3951 (131700)
MON. POINT	41 (1367)	63 (2100)	123 (4100)	172 (5733)	399 (13300)
POINT	640 (21333)	84 (2800)	158 (5267)	46 (1533)	928 (30933)
TOTAL	4632 (154400)	147 (4900)	281 (9367)	218 (7266)	5278 (175933)
CHLORIDE					
LAKE MURPHY	8457 (2948567)				8457 (2948567)
MON. POINT	3394 (113133)	9188 (306267)	5197 (173233)	5454 (181800)	23233 (774433)
POINT	102812 (3427667)	5730 (191000)	10420 (360000)	3144 (104800)	122606 (4086867)
TOTAL	144663 (6448767)	14918 (497267)	16117 (537233)	8598 (286600)	234296 (7809867)
SILICA					
LAKE MURPHY	7020 (234000)				7020 (234000)
MON. POINT	408 (13600)	307 (10233)	707 (24000)	951 (31700)	2413 (80433)
POINT	1274 (42467)	164 (5467)	544 (18467)	98 (3267)	1880 (62668)
TOTAL	8702 (290067)	471 (15700)	1041 (36367)	1049 (34967)	11313 (377101)

BASIN LOADINGS IN MEGALITONS PER MONTH FOR DECEMBER, 1980
(AVE DAILY LOADS IN KG/DAY)

	DEI/ST. CLP BASIN	WESTERN BASIN	CENTRAL BASIN	EASTERN BASIN	TOTAL
TOTAL PHOSPHORUS					
LAKE MURUM	150 (4468)	43 (1387)	53 (1710)	37 (1194)	154 (4968)
NO. POINT	50 (1903)	54 (1792)	125 (4032)	25 (806)	192 (6194)
POINT	176 (5677)	97 (3129)	178 (5742)	62 (2000)	380 (12257)
TOTAL	389 (12508)				726 (23419)
ORTHOPHOSPHORUS					
LAKE MURUM	61 (1946)	20 (645)	13 (419)	12 (387)	61 (1968)
NO. POINT	24 (774)	27 (871)	60 (1935)	12 (387)	69 (2225)
POINT	133 (4200)	47 (1516)	73 (2354)	24 (774)	232 (7483)
TOTAL	218 (7032)				362 (11676)
NITRATE-NITRIFIC NITROGEN					
LAKE MURUM	4044 (131742)	870 (28045)	534 (17226)	709 (22711)	4044 (131742)
NO. POINT	934 (30129)	220 (7097)	308 (9935)	134 (433)	3047 (98291)
POINT	458 (14903)	1090 (35162)	802 (27161)	893 (27194)	1620 (52258)
TOTAL	5976 (192774)				8751 (282291)
AMMONIA NITROGEN					
LAKE MURUM	166 (5355)	17 (508)	26 (839)	24 (774)	166 (5355)
NO. POINT	12 (387)	284 (9161)	512 (16516)	133 (4200)	79 (2588)
POINT	1232 (39742)	301 (9704)	538 (17355)	157 (5064)	2161 (69709)
TOTAL	1410 (45444)				2406 (77612)
ORGANIC NITROGEN					
LAKE MURUM	4042 (130387)	351 (11323)	363 (11710)	247 (7968)	4042 (130387)
NO. POINT	218 (7032)	49 (2871)	166 (5355)	48 (1508)	1179 (38033)
POINT	674 (21742)	440 (14124)	529 (17065)	295 (9516)	977 (31516)
TOTAL	4934 (159161)				6108 (199936)
CHLORINE					
LAKE MURUM	90514 (2919806)	17809 (574484)	14079 (454161)	8090 (260968)	90514 (2919806)
NO. POINT	14181 (457452)	5996 (193419)	11358 (366387)	3249 (104406)	54159 (1747065)
POINT	110128 (3552516)	23805 (767903)	25437 (820548)	11339 (365774)	130731 (4217128)
TOTAL	214823 (6929774)				275404 (8883999)
SILICA					
LAKE MURUM	7192 (232000)	1753 (56548)	1943 (63323)	1377 (44419)	7192 (232000)
NO. POINT	1461 (47129)	187 (6032)	356 (11484)	101 (3258)	6554 (211419)
POINT	1373 (44290)	1940 (62580)	2319 (74807)	1478 (47677)	2017 (65064)
TOTAL	10026 (323419)				15763 (508483)

END

DATE
FILMED

9 - 83

DTI